PENNSYLVANIA TURNPIKE COMMISSION

INDEX OF STANDARDS FOR ROADWAY CONSTRUCTION

STANDARD DRAWING NUMBER		DRAWING DATE	DESCRIPTION
EARTHWORK			
PTS–100	(2 SHEETS)	JANUARY 2019	WIDENED EMBANKMENT DETAILS
PAVEMENTS			
PTS–110		JANUARY 2019	SLAB STABILIZATION
PTS–111		JANUARY 2019	RECESSED BRIDGE APPROACH SLAB
PTS–112		JANUARY 2019	PLACEMENT OF JOINT SEALING AND SNAP
DRAINAGE			
PTS–120		JANUARY 2019	TYPE RS INLETS AND GRATE
PTS–121	(2 SHEETS)	JANUARY 2019	MEDIAN INLET CONSTRUCTION & REPLACEMENT
PTS–122		JANUARY 2019	CAPPING OF MEDIAN INLETS
PTS–123		JANUARY 2019	6" PAVEMENT BASE DRAIN AND MEDIAN BASE DRAIN
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GUIDE RAIL			
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PTS–135		JANUARY 2019	TEMPORARY GUIDE RAIL CONNECTIONS
CONCRETE BARRIER			
PTS–140	(3 SHEETS)	JANUARY 2019	CONCRETE MEDIAN BARRIER & CONCRETE GLARE SCREEN
PTS–141		JANUARY 2019	CONCRETE GLARE SCREEN & CONCRETE MEDIAN BARRIER – MODIFIED OVER MODIFIED TYPE M INLET
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PTS–144		JANUARY 2019	SINGLE FACE CONCRETE BARRIER BURIED IN CUT SLOPE
PTS–145	(2 SHEETS)	JANUARY 2019	ABUTMENT TRANSITION PIECES
PTS–146		JANUARY 2019	GUIDE RAIL TO SINGLE FACE CONCRETE BARRIER
PTS–147		JANUARY 2019	PIER TRANSITION PIECE
PTS–148		JANUARY 2019	MONOPIPE CASSION TRANSITION PIECE
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PTS–150	(2 SHEETS)	JANUARY 2019	CANTILEVER SLIDING ACCESS GATE
PTS–154		JANUARY 2019	ROCK FALL FENCE
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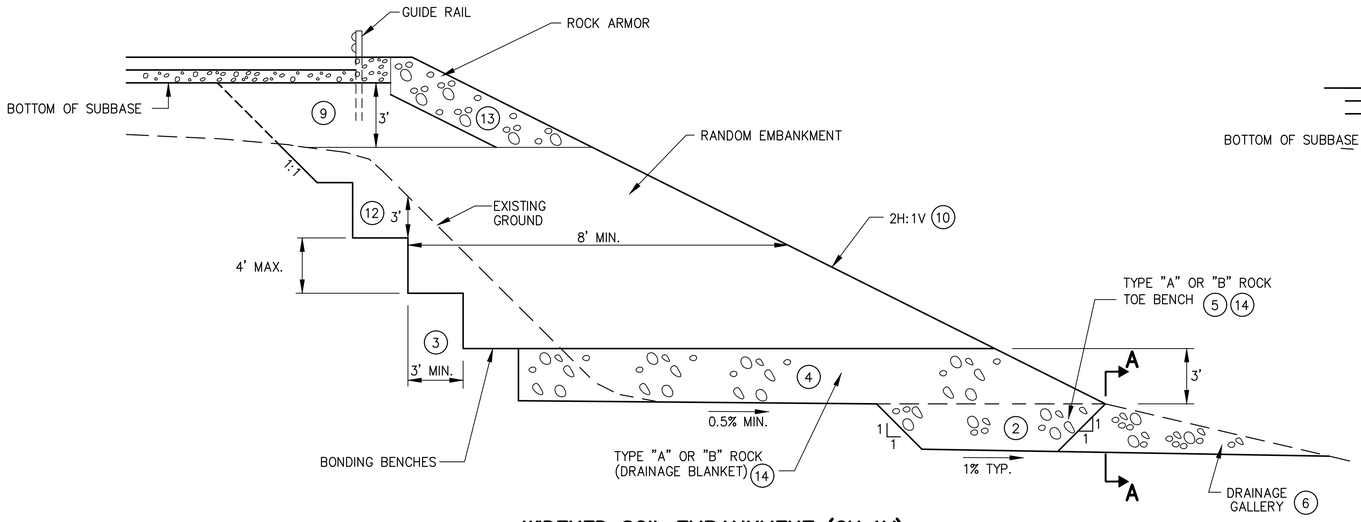
* PTS–170	(2 SHEETS)	APRIL 2021	ROUND LID JUNCTION BOX DETAILS
ROADSIDE DEVELOPMENT			
PTS–180	(3 SHEETS)	JANUARY 2019	ROADSIDE DEVELOPMENT
PTS–181		JANUARY 2019	PARKING AREAS
CUSTOMER SAFETY DEVICES			
PTS–191		JANUARY 2019	SNOWPLOWABLE RAISED PAVEMENT MARKERS (SRPM)
PTS–192		JANUARY 2019	SONIC NAP ALERT PATTERN (SNAP)

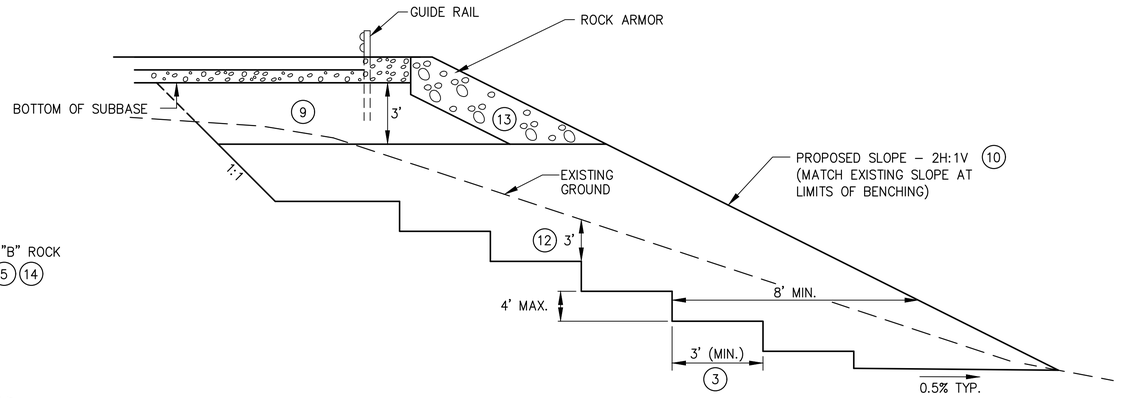
* CHANGE NO. 1, EFFECTIVE APRIL 2021

PENNA TURN PIKE

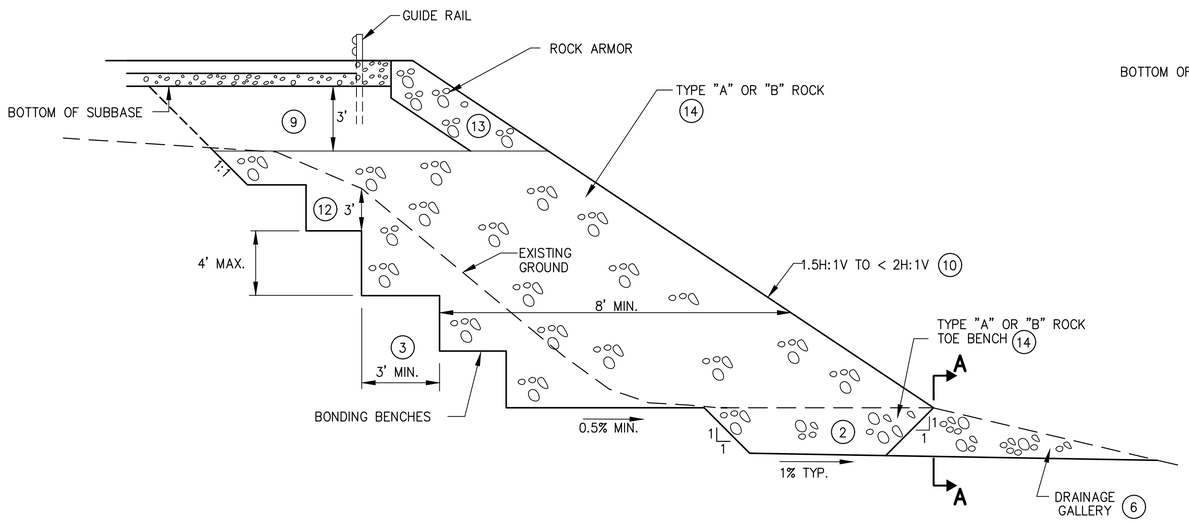
JANUARY 2019 EDITION



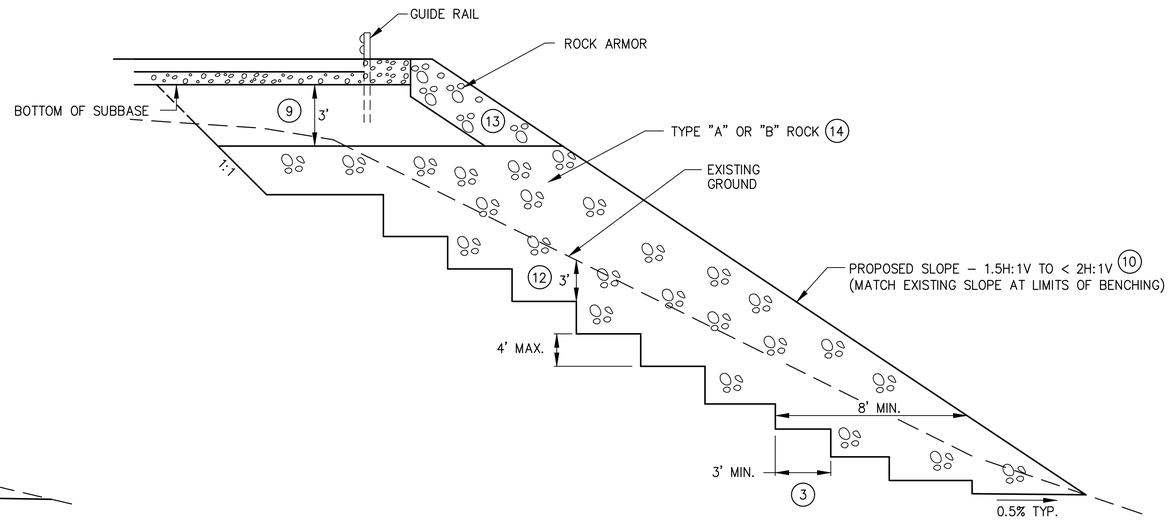
WIDENED SOIL EMBANKMENT (2H:1V)



SLIVER SOIL EMBANKMENT (2H:1V)



STEEPENED ROCK EMBANKMENT (1.5H:1V TO < 2H:1V)



SLIVER ROCK EMBANKMENT (1.5H:1V TO < 2H:1V)

(FOR BENCHING WHICH INTERSECTS THE EXISTING SLOPE PRIOR TO REACHING THE TOE OF SLOPE)

SEE NOTES AND SECTIONS ON SHEET 2 OF 2

PENNA TURNPIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

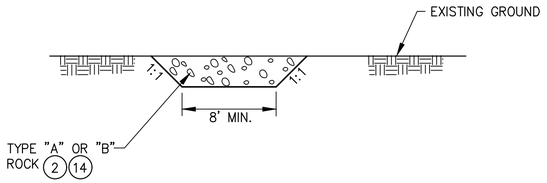
WIDENED EMBANKMENT DETAILS

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

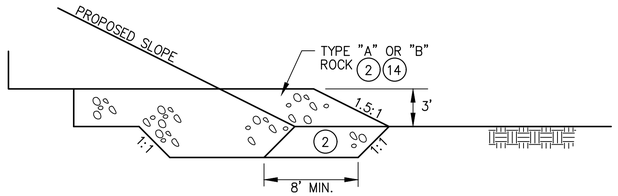
FILE NAME: PTS-100-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 2
DATE: JANUARY 2019
PTS-100

NOTES:

1. SEE SECTION 206 FOR ROCK TYPE DEFINITIONS (TYPE A, TYPE B, ETC.).
2. EXCAVATE TOE BENCH AND DRAINAGE GALLERY EITHER A MINIMUM OF 3 FEET, OR TO COMPETENT SOIL AS DIRECTED BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE AND AS SHOWN ON THE PLAN DRAWINGS AND CROSS SECTIONS.
3. IF DISTANCE BETWEEN NEW AND EXISTING EMBANKMENT SLOPE EXCEEDS 8 FEET THEN BONDING BENCHES SHOULD BE 3 FEET MAX. IN WIDTH.
4. TYPE "A" OR "B" ROCK DRAINAGE BLANKET WILL BE PLACED A MAXIMUM OF 3 FEET ABOVE TOE OF SLOPE, AS SHOWN ON THE CROSS SECTIONS AND/OR AS DIRECTED BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE. (PLACE TYPE "A" OR "B" ROCK AS DESCRIBED IN SECTION 206 UNLESS OTHERWISE APPROVED BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE.
5. ROCK MAY BE ELIMINATED FROM THE TOE BENCH WHEN THE HEIGHT OF FILL IS LESS THAN 10 FEET. SUBJECT TO APPROVAL BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE.
6. LOCATE DRAINAGE GALLERIES AT LOW POINTS OR 300 FEET CENTER TO CENTER, WHERE RIGHT-OF-WAY IS AVAILABLE. DAYLIGHT ON EXISTING SLOPE WHENEVER POSSIBLE. USE ALTERNATE GALLERY DETAIL WHERE CONSTRAINTS EXIST (EX. LIMITED RIGHT-OF-WAY, ENVIRONMENTAL CONCERNS, ETC.).
7. THESE DETAILS HAVE BEEN PROVIDED AS A GUIDE FOR BENCHING OPERATIONS AND MAY BE MODIFIED TO MEET EXISTING CONDITIONS.
8. WASTE ANY UNSUITABLE MATERIAL IN ACCORDANCE WITH SECTION 105.14.
9. PLACE THE TOP 3 FEET OF NEW EMBANKMENT IN LAYERS NOT EXCEEDING AN 8 INCH LIFT AT 100% COMPACTION ACCORDING TO SECTION 206.3 (B). DO NOT PLACE MATERIAL THAT WILL IMPEDE GUIDE RAIL INSTALLATION.
10. A DETAILED SLOPE STABILITY ANALYSIS MAY BE REQUESTED BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE.
11. ALTERNATIVES TO "STEEPENED ROCK EMBANKMENTS" (GEOSYNTHETICS, RETAINING STRUCTURES, ETC.) MUST BE APPROVED BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE AND ACCOMPANIED BY A DETAILED SLOPE STABILITY ANALYSIS.
12. REMOVE AN ADDITIONAL 3 FEET OF EXISTING EMBANKMENT MATERIAL WHEN PERFORMING BONDING BENCH CONSTRUCTION. THIS REQUIREMENT MAY BE ELIMINATED, WITH THE APPROVAL OF THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE, WHERE CONSTRAINTS EXIST. CONSTRUCT BONDING BENCHES CONCURRENTLY WITH THE PLACEMENT OF EMBANKMENT MATERIAL.
13. PLACE ROCK ARMOR ON ALL FILL SLOPES 2:1 OR STEEPER IN ACCORDANCE WITH PTS-124. EXTEND ROCK ARMOR TO THE TOP OF ROCK EMBANKMENT.
14. UNLESS OTHERWISE SHOWN ON THE CROSS-SECTIONS. IF SUFFICIENT TYPE "B" ROCK IS NOT AVAILABLE FROM ON-SITE SOURCES, USE EITHER TYPE "A" OR TYPE "B" ROCK FROM FOREIGN BORROW. ALL TYPE "B" ROCK FROM FOREIGN BORROW REQUIRES ADVANCE APPROVAL BY THE COMMISSION'S GEOTECHNICAL REPRESENTATIVE.
15. WHEN WITHIN 100 FEET OF STRUCTURES SEE CONTRACT DOCUMENTS FOR PROPOSED WIDENED EMBANKMENT SLOPE TREATMENT.
16. SLOPES STEEPER THAN 1.5H:1V ARE NOT ACCEPTABLE.



SECTION A-A (6)



ALTERNATE DRAINAGE GALLERY DETAIL (6)

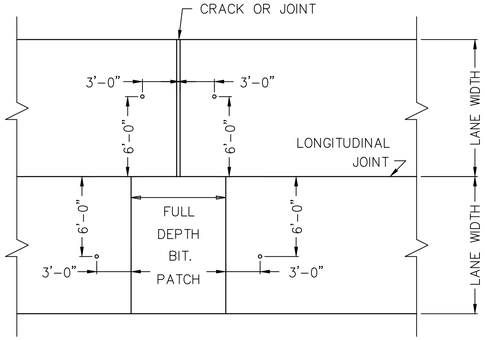
PENNA TURN PIKE

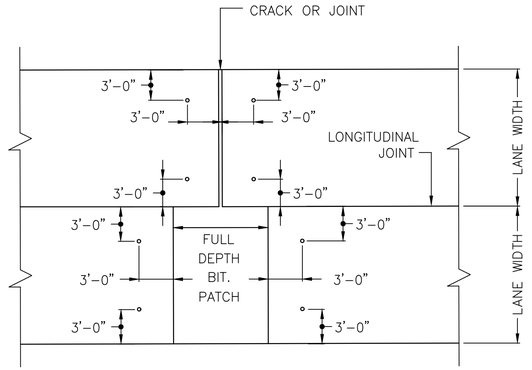
RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

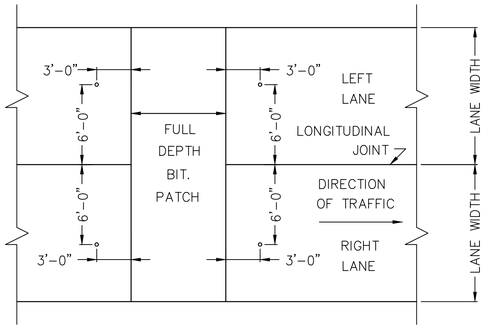
WIDENED EMBANKMENT DETAILS

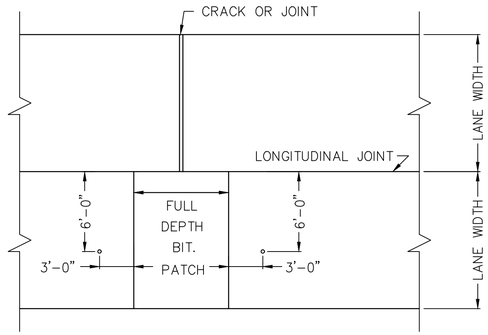
PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

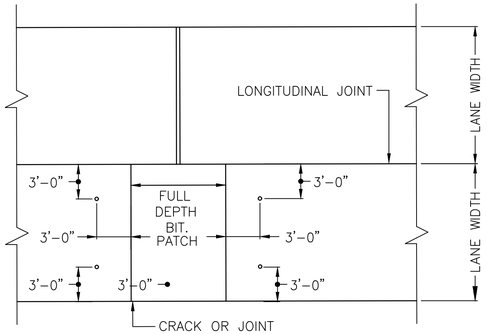
FILE NAME: PTS-100-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 2
DATE: JANUARY 2019
PTS-100

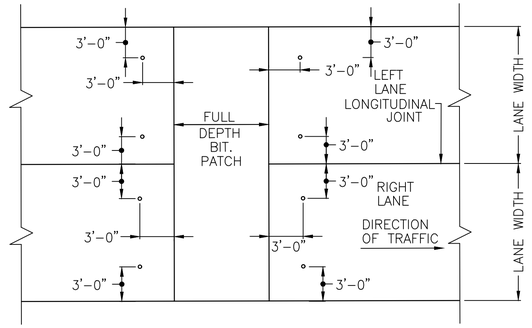


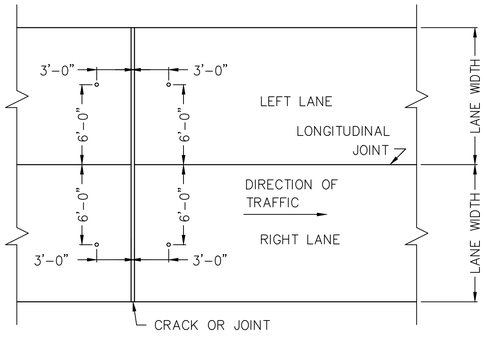


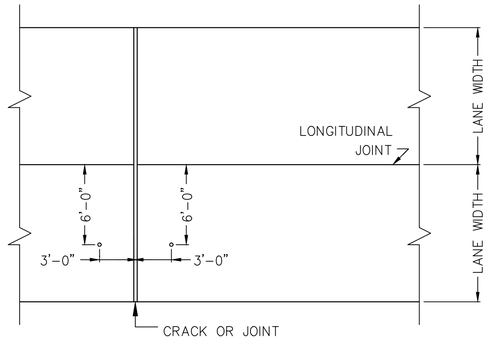


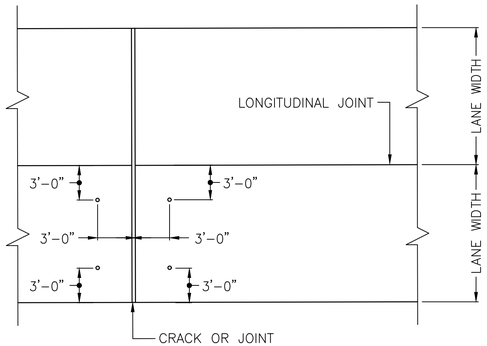


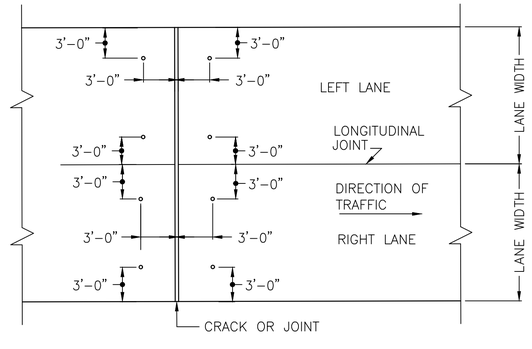












ADJACENT LANES BEING UNDERSEALED

ONE LANE BEING UNDERSEALED

HOLE PATTERN FOR PAVEMENT SLAB STABILIZATION USING ASPHALT

N.T.S.

ONE LANE BEING UNDERSEALED

ADJACENT LANES BEING UNDERSEALED

HOLE PATTERN FOR PAVEMENT SLAB STABILIZATION USING HIGH DENSITY POLYURETHANE

N.T.S.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

SLAB STABILIZATION

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

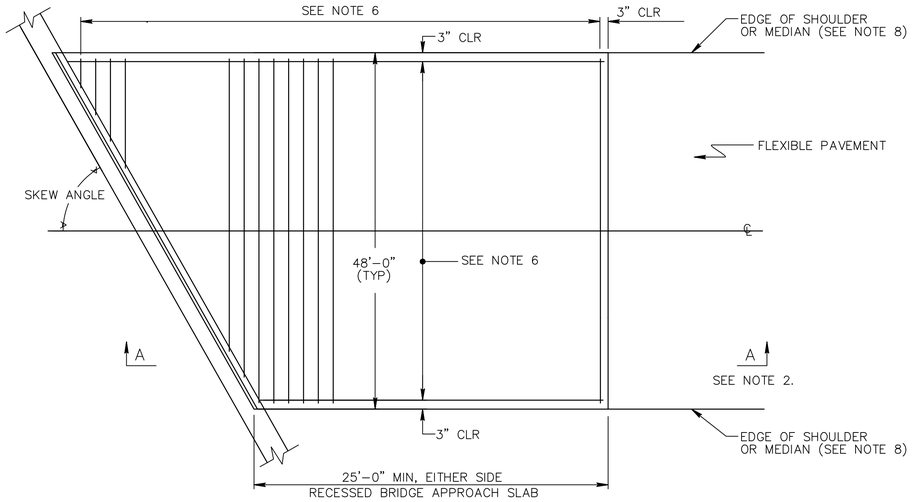
FILE NAME: PTS-110.dwg

DRAWING TYPE: 5A

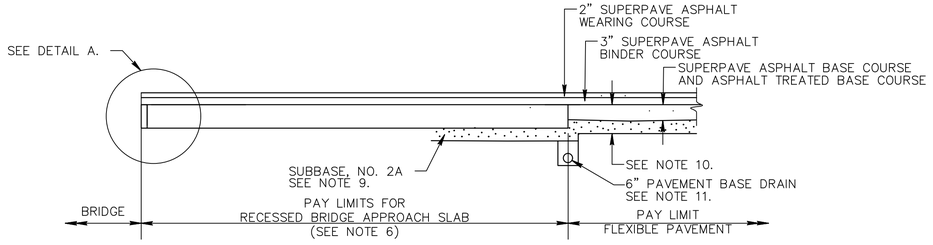
SHEET 1 OF 1

DATE: JANUARY 2019

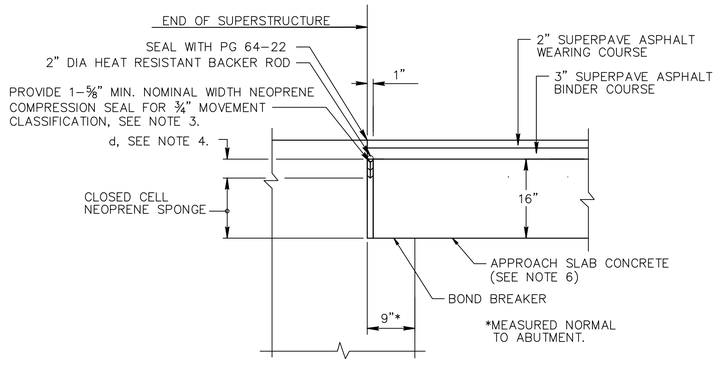
PTS-110



PLAN



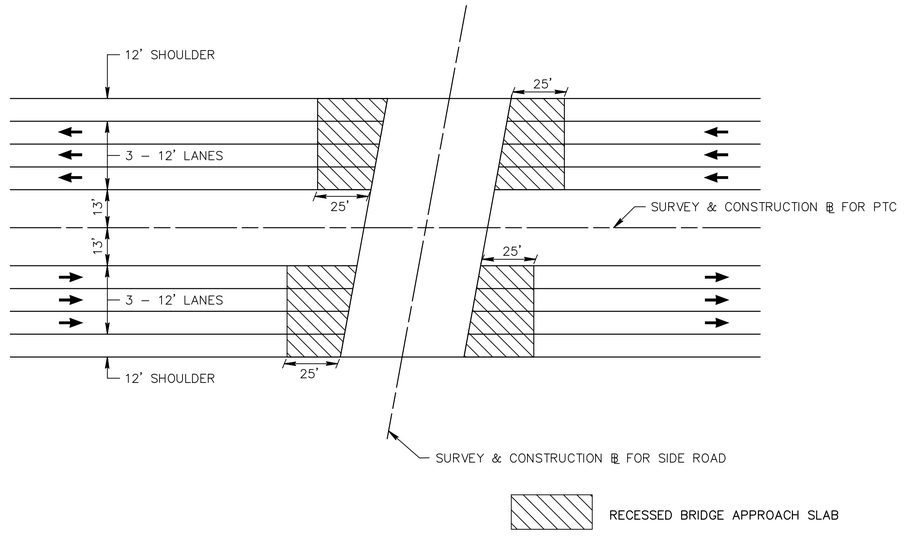
SECTION A-A



DETAIL A

NOTES

1. CONSTRUCT IN ACCORDANCE WITH THIS STANDARD DRAWING, AS PER RC-23M OR AS INDICATED ON THE STRUCTURE DRAWINGS.
2. WHEN CONSTRUCTION INVOLVES MORE THAN 2 LANES, CONNECT ADDITIONAL LANES REQUIRED TO STANDARD 2 LANE BRIDGE APPROACH SLAB USING TYPE L CONSTRUCTION JOINTS, AS SHOWN ON RC-20M, SHEET 2.
3. INSTALL NEOPRENE COMPRESSION SEALS TO A UNIFORM DEPTH WITH TOP OF THE SEAL FROM 1/4" TO 3/8" BELOW THE LEVEL OF THE PAVEMENT SURFACE. MAKE THE TOP EDGES OF THE CONTACT SURFACES ON BOTH SIDES OF THE SEAL AT THE SAME ELEVATION.
4. DETERMINE "d" BY ADDING 3/4" TO THE MAXIMUM COMPRESSED HEIGHT OF THE NEOPRENE COMPRESSION SEAL. (SEE MANUFACTURER'S INFORMATION.)
5. CONSTRUCT THE BRIDGE APPROACH SLAB AFTER THE BRIDGE DECK IS CONSTRUCTED.
6. PROVIDE REINFORCEMENT BARS, EPOXY COATED IN ACCORDANCE WITH SECTION 709.1 (c) AND AS PER RC-23M.
7. CONSTRUCT ALL CURBING WITHIN THE LIMITS OF THE RECESSED BRIDGE APPROACH SLAB AS BITUMINOUS CURB.
8. RECESSED BRIDGE APPROACH SLAB SHALL EXTEND ACROSS THE RIGHT SHOULDER AND TO THE EDGE OF THE MEDIAN.
9. AT AREAS OUTSIDE THE LIMITS OF THE STRUCTURE BACKFILL, SUBBASE THICKNESS BENEATH APPROACH SLAB TO MATCH SUBBASE THICKNESS OF ROADWAY.
10. DEPTH IS EQUAL TO THE TOTAL DEPTHS OF THE BITUMINOUS CONCRETE BASE COURSE, ASPHALT TREATED BASE COURSE AND SUBBASE, NO. 2A (20" MINIMUM).
11. INSTALL 6" PAVEMENT BASE DRAIN TRANSVERSELY ACROSS THE LANES AND SHOULDER. INSTALL PAVEMENT BASE DRAIN AS PER RC-30M, PTS-700, PTS-701 AND IN ACCORDANCE WITH SECTION 610. IF REQUIRED, PLACE ON STRUCTURE BACKFILL AS PER PTS-700 AND PTS-701. THIS WORK IS CONSIDERED INCIDENTAL TO THE RECESSED BRIDGE APPROACH SLAB.



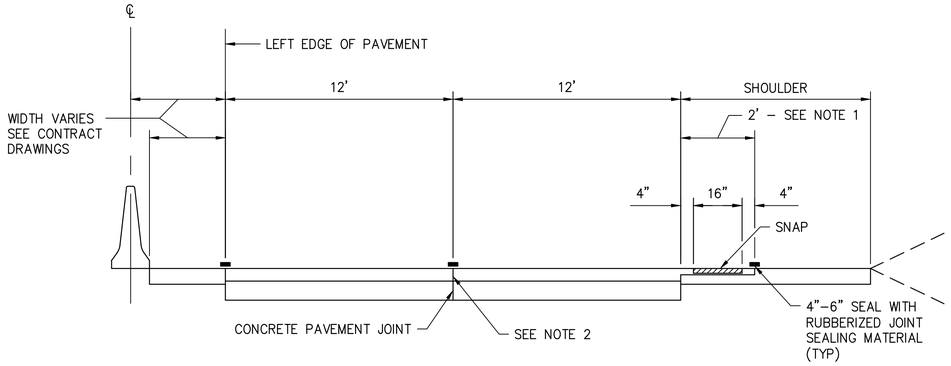
PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

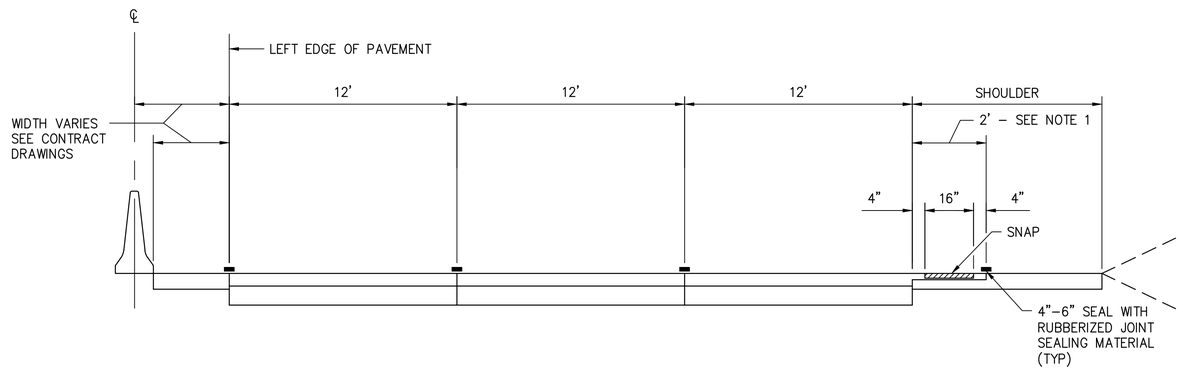
RECESSED BRIDGE APPROACH SLAB

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

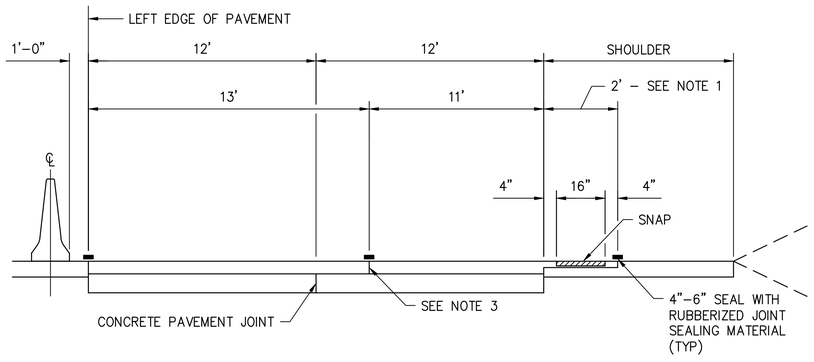
FILE NAME: PTS-111.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1
DATE: JANUARY 2019
PTS-111



TWO LANE ONE DIRECTION – MAINLINE
TYPICAL SECTION



THREE LANE ONE DIRECTION
TYPICAL SECTION



TWO LANE ONE DIRECTION – NORTHEAST EXTENSION
TYPICAL SECTION

NOTES:

1. SEE CONTRACT DOCUMENTS FOR LIMITS OF SHOULDER RESURFACING. FOR MAINLINE RESURFACING CONTRACTS, PLACE CONSTRUCTION JOINT IN BITUMINOUS OVERLAY 2'–0" MINIMUM OFFSET INTO THE SHOULDER FROM RIGHT LANE..
2. FOR MAINLINE RESURFACING CONTRACTS OVER CONCRETE PAVEMENT, PLACE CONSTRUCTION JOINT IN BITUMINOUS OVERLAY DIRECTLY ABOVE THE JOINT IN THE CONCRETE PAVEMENT.
3. FOR TWO LANE – ONE DIRECTION NORTHEAST RESURFACING CONTRACTS, PLACE CONSTRUCTION JOINT IN BITUMINOUS OVERLAY 1'–0" OFFSET INTO THE RIGHT LANE FROM THE JOINT IN THE CONCRETE PAVEMENT.
4. SEE PTS–192 FOR SNAP.
5. SEE PTS–980 FOR PLACEMENT OF TRAFFIC LINE MARKINGS.

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

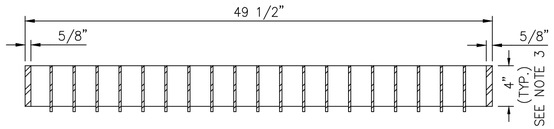
PLACEMENT OF JOINT SEALING AND SNAP

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

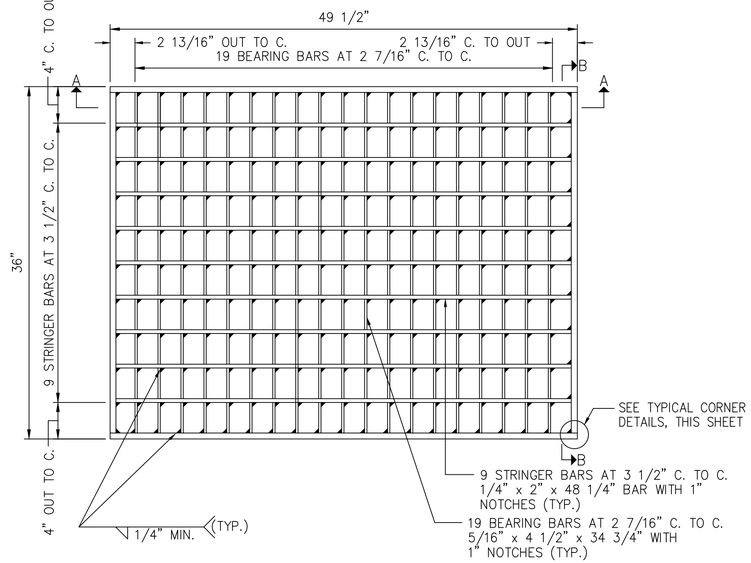
FILE NAME: PTS-112.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-112

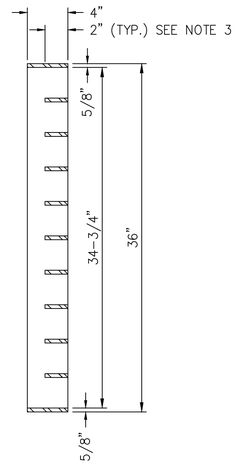


SECTION A–A

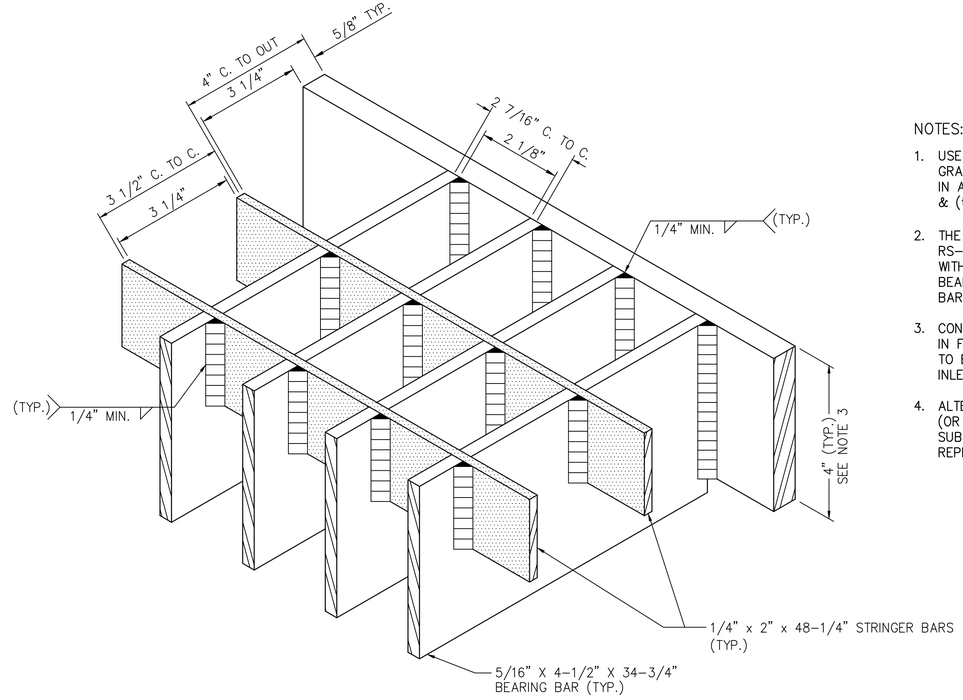


STRUCTURAL STEEL GRATE FOR TYPE RS INLETS

SEE NOTES 1 & 2



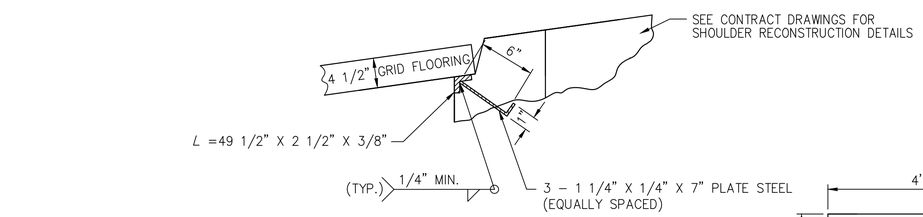
SECTION B–B



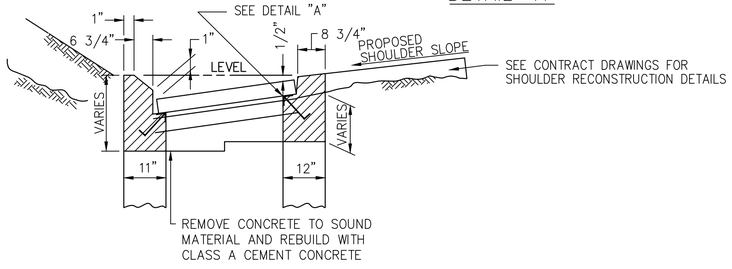
BEARING & STRINGER BARS SPACING DETAILS

NOTES:

1. USE ONLY A–36 STEEL FOR ALL RS INLET GRATES AND FRAMES. GALVANIZE AND WELD IN ACCORDANCE WITH SECTIONS 1105.02 (s) & (t).
2. THE END BEARING BARS FOR RS–INLETS ARE TO BE FLUSH MOUNTED WITH TOP OF 5/16–INCH x 4 1/2–INCH BEARING AND 1/4–INCH x 2–INCH STRINGER BARS.
3. CONTRACTOR TO VERIFY DIMENSION IN FIELD PROIR TO MANUFACTURING, TO ENSURE NEW GRATE WILL BE FLUSH WITH INLET TOP.
4. ALTERNATE METHODS OF RAISING (OR LOWERING) RS INLETS ARE SUBJECT TO THE APPROVAL OF THE REPRESENTATIVE.



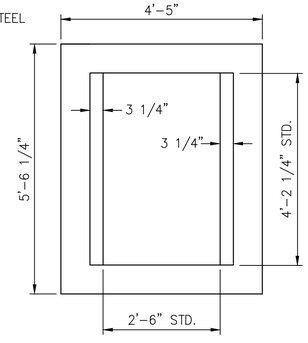
DETAIL "A"



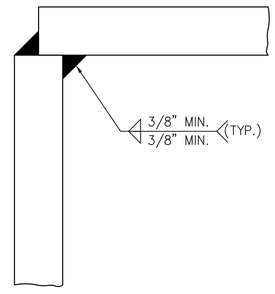
SECTION

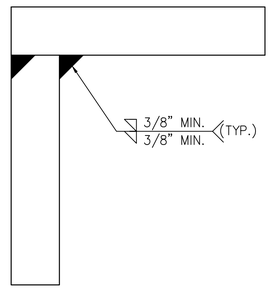
RS INLET HEIGHT ADJUSTMENT

SEE NOTE 4



PLAN





TYPICAL CORNER DETAILS

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

TYPE RS INLETS AND GRATE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

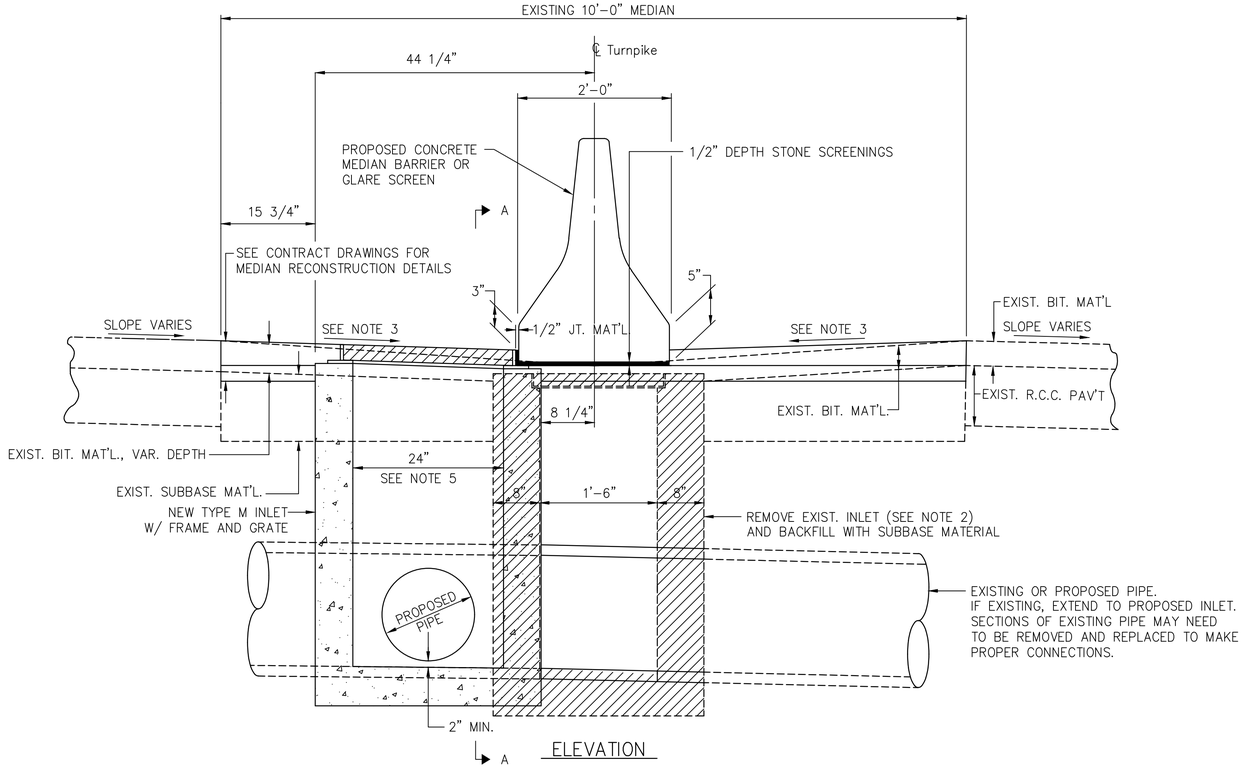
FILE NAME: PTS-120.dwg

DRAWING TYPE: 5A

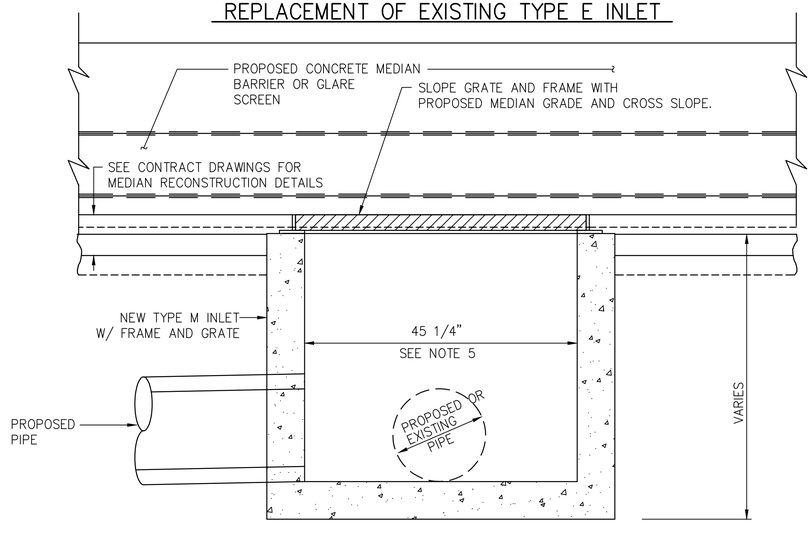
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-120



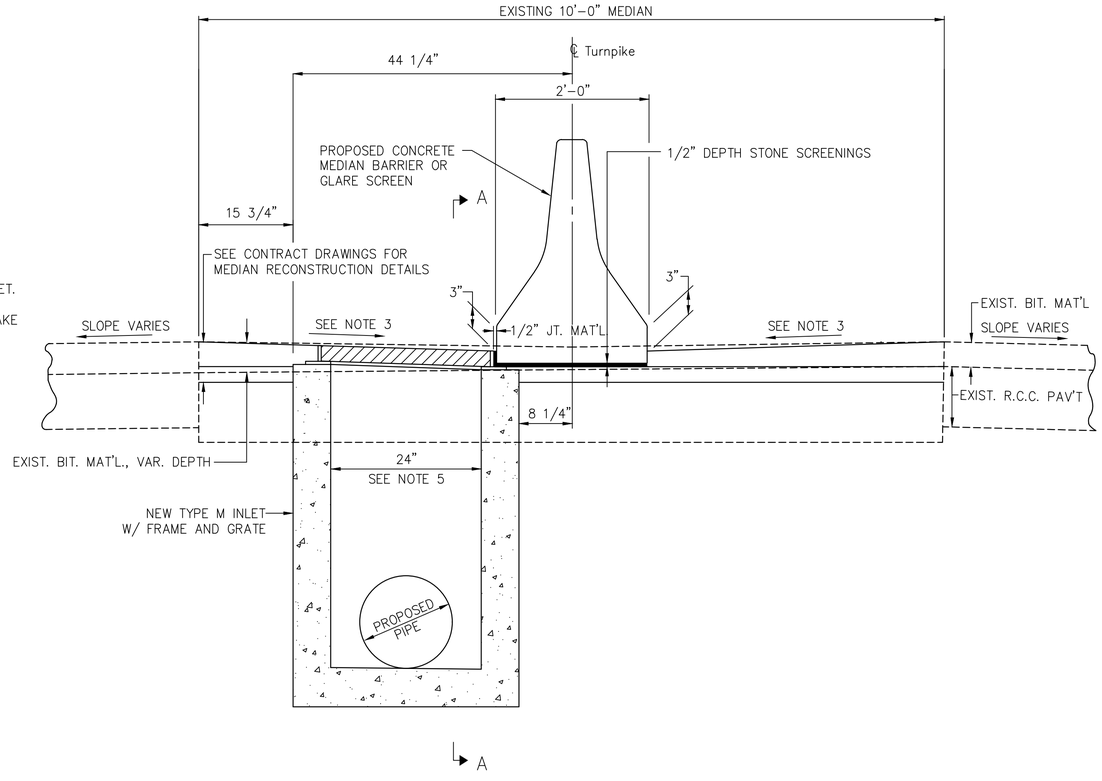
REPLACEMENT OF EXISTING TYPE E INLET



SECTION A-A

NOTES:

1. CONSTRUCT INLETS IN ACCORDANCE WITH RC-46M AND SECTION 605.
2. SIZE AND CONFIGURATION OF EXISTING INLETS MAY VARY.
3. SEE CONTRACT DRAWINGS AND/OR CROSS SECTIONS FOR PROPOSED SLOPE.
4. FABRICATE INLET FRAME AND GRATE IN ACCORDANCE WITH RC-45M, AND AS SHOWN.
5. VERIFY THAT EXISTING OR PROPOSED PIPE OUTSIDE DIAMETER FITS WITHIN THE CLEAR WALL OPENING AS INDICATED. SIZE INLET BOX FOR LARGER PIPE OUTSIDE DIAMETERS IN ACCORDANCE WITH RC-46M.
6. PROVIDE INLET BOX WALL AND BOTTOM SLAB THICKNESS BASED UPON TYPE OF CONSTRUCTION (I.E. PRECAST OR CAST-IN-PLACE) AND DEPTH OF INLET IN ACCORDANCE WITH RC-46M.



ELEVATION

CONSTRUCTION TYPE M INLET

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

MEDIAN INLET CONSTRUCTION & REPLACEMENT

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

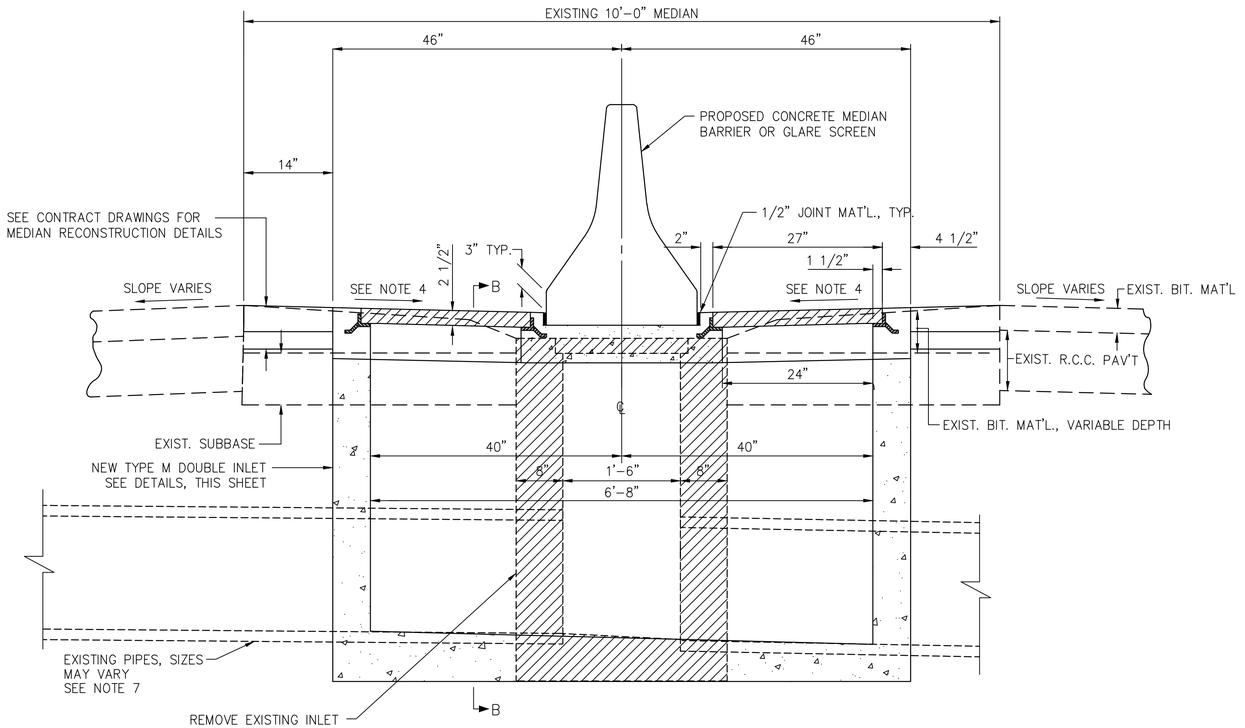
FILE NAME: PTS-121-1.dwg

DRAWING TYPE: 5A

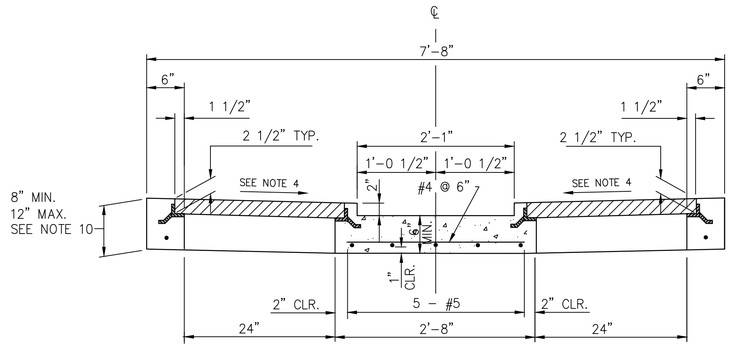
SHEET 1 OF 2

DATE: JANUARY 2019

PTS-121



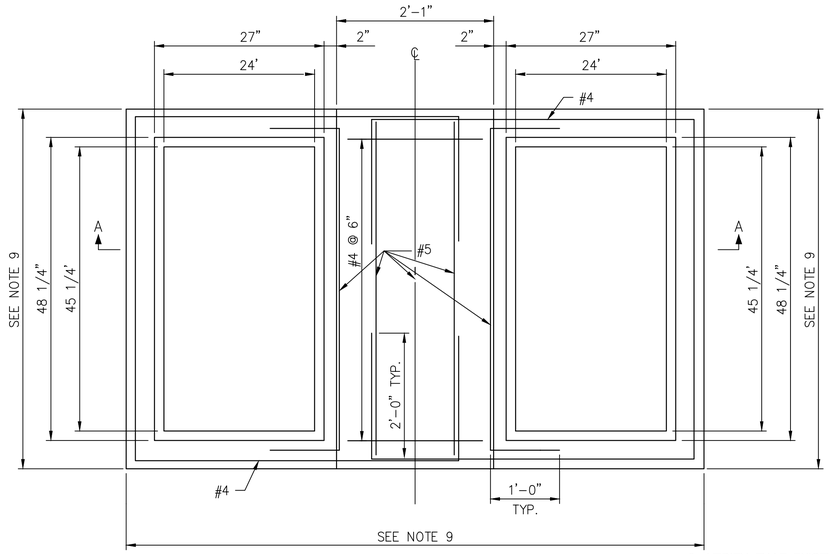
CONSTRUCTION OF TYPE M DOUBLE INLET



SECTION A-A

NOTES:

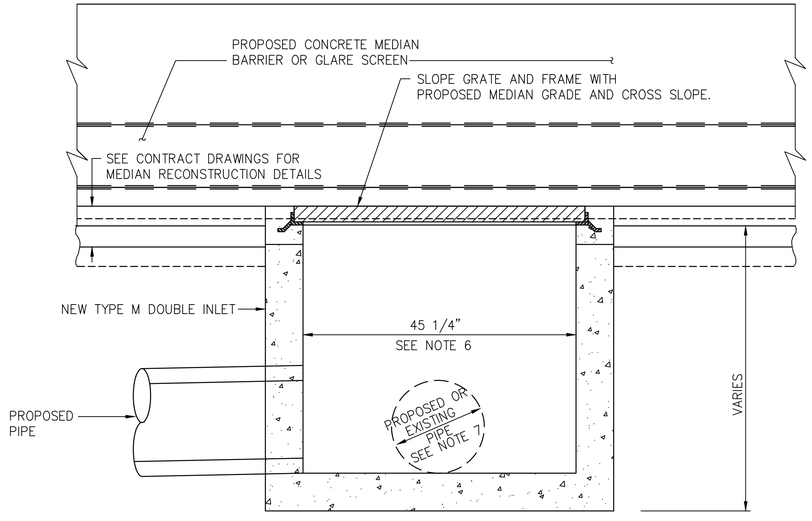
1. CONSTRUCT INLETS IN ACCORDANCE WITH RC-46M AND SECTION 605.
2. SIZE AND CONFIGURATION OF EXISTING INLETS MAY VARY.
3. FABRICATE INLET FRAME IN ACCORDANCE WITH RC-45M, AND AS SHOWN.
4. SEE CONTRACT DRAWINGS AND/OR CROSS SECTIONS FOR PROPOSED SLOPE.
5. 3 PIECE CONCRETE TOP UNITS ARE AN ACCEPTABLE ALTERNATIVE UPON APPROVAL OF SHOP DRAWINGS.
6. VERIFY THAT EXISTING OR PROPOSED PIPE OUTSIDE DIAMETER FITS WITHIN THE CLEAR WALL OPENING AS INDICATED. SIZE INLET BOX FOR LARGER PIPE OUTSIDE DIAMETERS IN ACCORDANCE WITH RC-46M.
7. MAX. PIPE SIZE SHALL BE 33" RCP OR 36" THERMOPLASTIC.
8. PROVIDE INLET BOX WALL AND BOTTOM SLAB THICKNESS BASED UPON TYPE OF CONSTRUCTION (I.E. PRECAST OR CAST-IN-PLACE) AND DEPTH OF INLET IN ACCORDANCE WITH RC-46M.
9. PROVIDE OUT-TO-OUT DIMENSIONS OF CONCRETE TOP UNIT TO MATCH OUT-TO-OUT DIMENSIONS OF INLET BOX.
10. PROVIDE 12" THICK CONCRETE TOP UNIT FOR COMPLETE INLET BOX REPLACEMENT AND PROVIDE 8" MINIMUM THICKNESS FOR REHABILITATION OF CONCRETE TOP UNIT ONLY.



6. VERIFY THAT EXISTING OR PROPOSED PIPE

PLAN

TYPICAL DETAIL OF CONCRETE TOP UNIT FOR TYPE M DOUBLE INLET
SEE NOTE 5



SECTION B-B

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

MEDIAN INLET CONSTRUCTION & REPLACEMENT

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

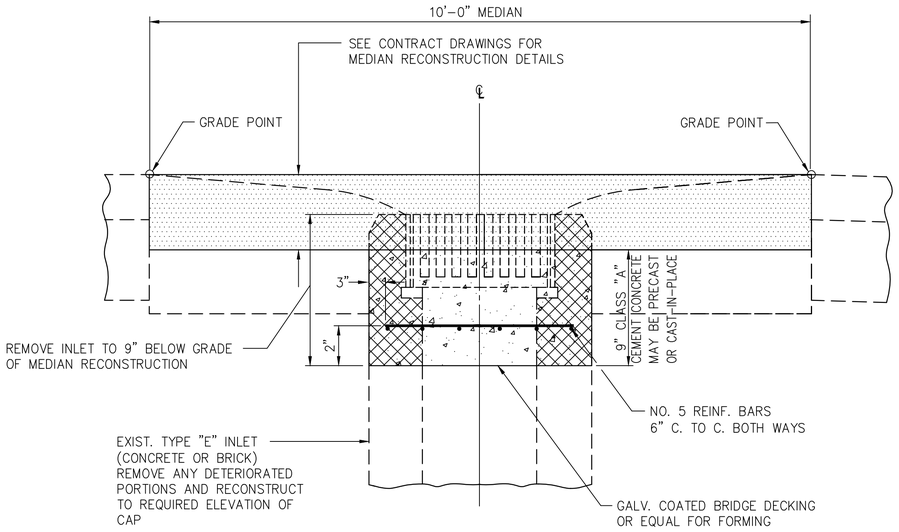
FILE NAME: PTS-121-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 2

DATE: JANUARY 2019

PTS-121

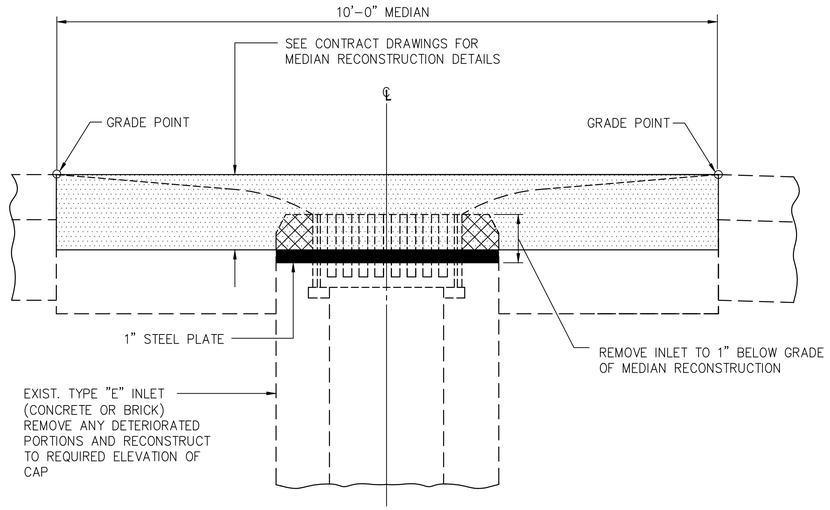
PERMANENT CAPPING OF MEDIAN INLETS

(TYPES E-10, E-11, EC OR EC-1)

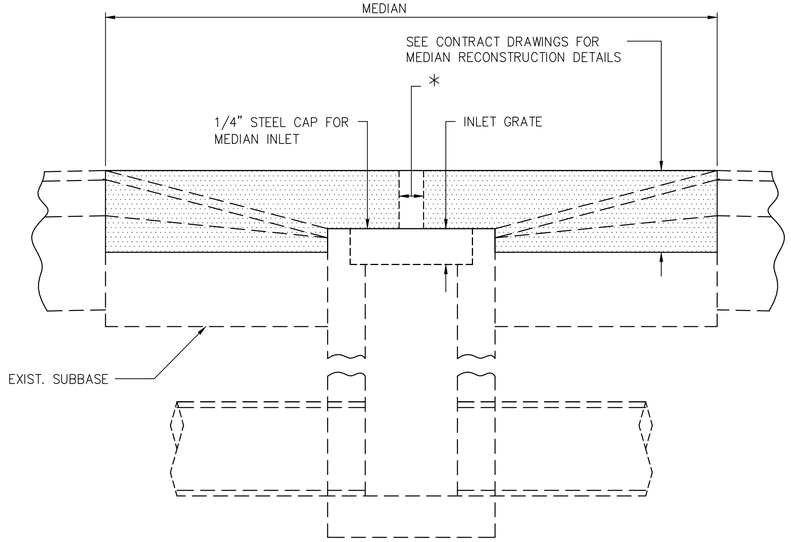


ALTERNATE A

NOTE: ALL REINFORCEMENT BARS TO BE EPOXY COATED

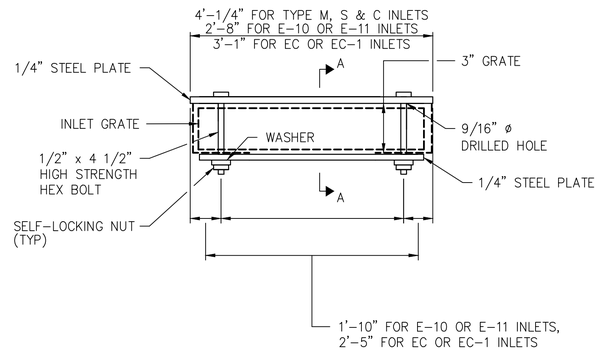


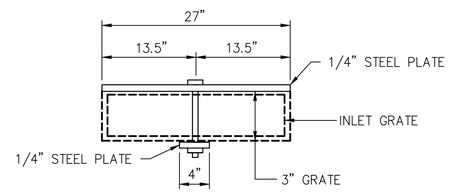
ALTERNATE B



TEMPORARY CAP – EXISTING OR NEW INLET

* INSTALL A MINIMUM OF 3-4"ø SCHEDULE 40 PVC PIPES (4"± LONG), EQUALLY SPACED, INSTALLED OVER OPENINGS IN 1/4" STEEL CAP, AT LOCATIONS DESIGNATED AND AS DIRECTED BY THE REPRESENTATIVE TO DRAIN SURFACE WATER.





SECTION A-A

1/4" STEEL CAP FOR MEDIAN INLET DETAIL

NOTE: DIMENSIONS TO BE VERIFIED IN THE FIELD TO FIT THRU INLET GRATE.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

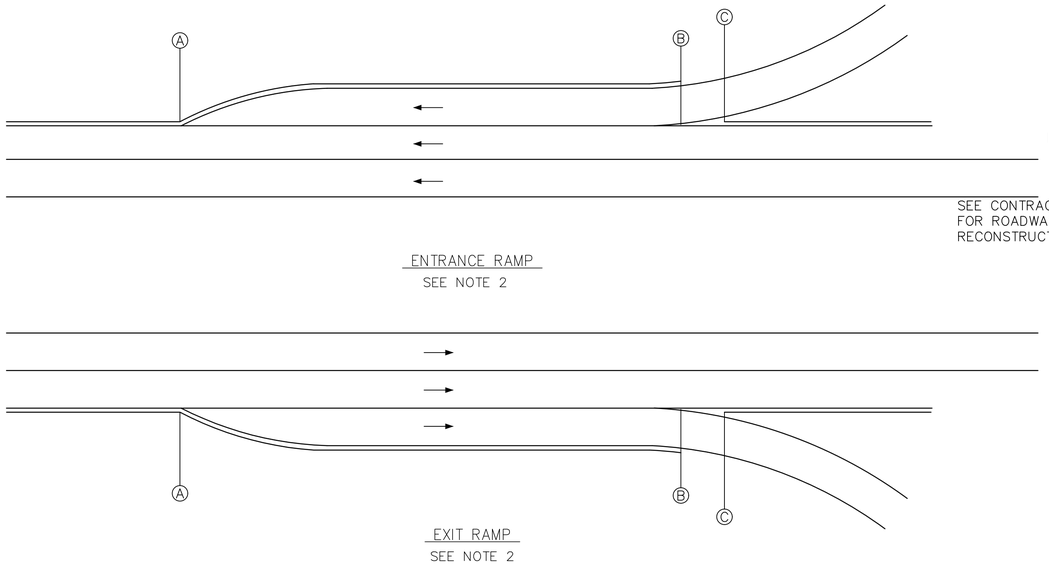
CAPPING OF MEDIAN INLETS

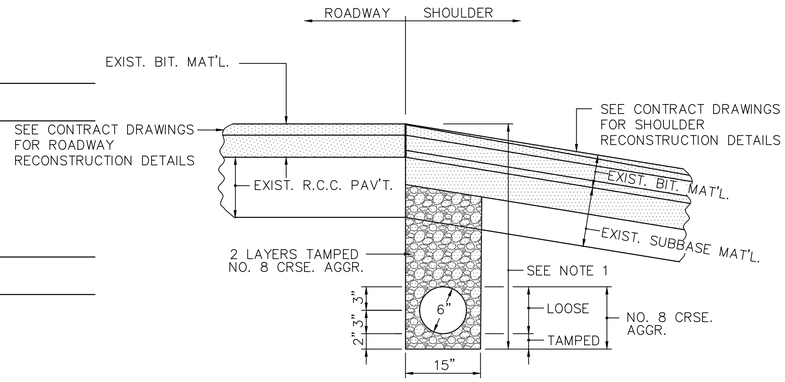
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-122.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-122



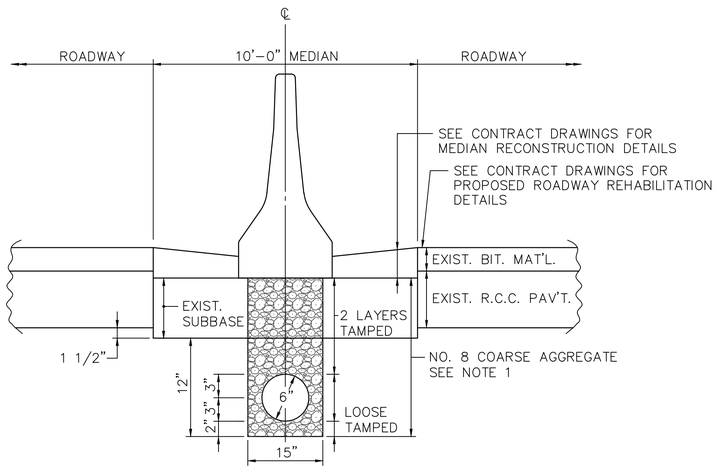


PAVEMENT BASE DRAIN
(REHABILITATION ONLY)

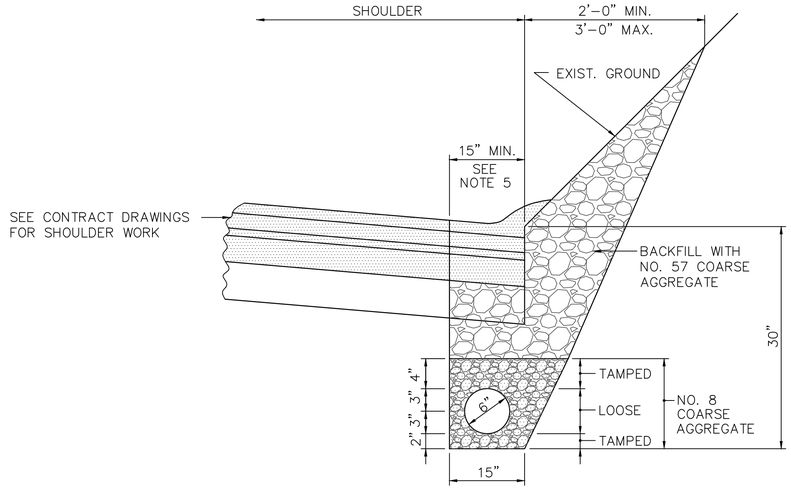
NOTES:

1. SEE CONTRACT DRAWINGS FOR PROPOSED DEPTH WHICH WILL REMOVE ANY EXISTING UNDERDRAIN.
2. IF THE ROADWAY GRADE AND/OR SLOPES DO NOT PERMIT THE PAVEMENT BASE DRAIN TO BE OUTLETTED AT THE FOLLOWING LIMITS, THEN STOP/START THE PAVEMENT BASE DRAIN AT THE NEAREST INLET OR AT A POINT WHERE IT MAY BE OUTLETTED ON THE SLOPE.
   a. STOP PAVEMENT BASE DRAIN AT POINT Ⓐ (LIMIT OF RAMP) IF THERE IS NO RAMP WORK INVOLVED IN THE PROJECT.
   b. STOP PAVEMENT BASE DRAIN AT POINT Ⓑ (BEGINNING OF PHYSICAL GORE) IF THERE IS RAMP WORK WHICH EXTENDS TO THIS POINT OR BEYOND. IF RAMP WORK STOPS PRIOR TO THIS POINT, STOP PAVEMENT BASE DRAIN AT THE SAME LIMIT AS THE RAMP WORK.
   c. START PAVEMENT BASE DRAIN AT POINT Ⓒ WHICH IS THE POINT AT WHICH THE GORE AREA IS WIDER THAN THE TRENCH WIDTH.
3. OUTLET PAVEMENT BASE DRAIN WITH SUBSURFACE DRAIN OUTLETS AS INDICATED ON RC-30M AND IN ACCORDANCE WITH SECTION 615.
4. INSTALL PAVEMENT BASE DRAIN ON RAMPS AS PER THE CONTRACT DRAWINGS.
5. FOR PAVEMENT BASE DRAIN WITH SLOPE DRAINAGE, TYPE I SEE CONTRACT DRAWINGS FOR PROPOSED SHOULDER WORK.
   a. IF THE FULL WIDTH OF THE SHOULDER IS TO BE MILLED AND PAVED, THEN INSTALL THE PAVEMENT BASE DRAIN WITH SLOPE DRAINAGE AND REPLACE THE SHOULDER PAVEMENT WITH BITUMINOUS BINDER COURSE PRIOR TO THE MILLING AND PAVING OPERATIONS.
   b. IF THE FULL WIDTH OF THE SHOULDER IS TO BE RECONSTRUCTED, THEN INSTALL THE PAVEMENT BASE DRAIN WITH SLOPE DRAINAGE AT THE SAME TIME AS THE SHOULDER WORK.

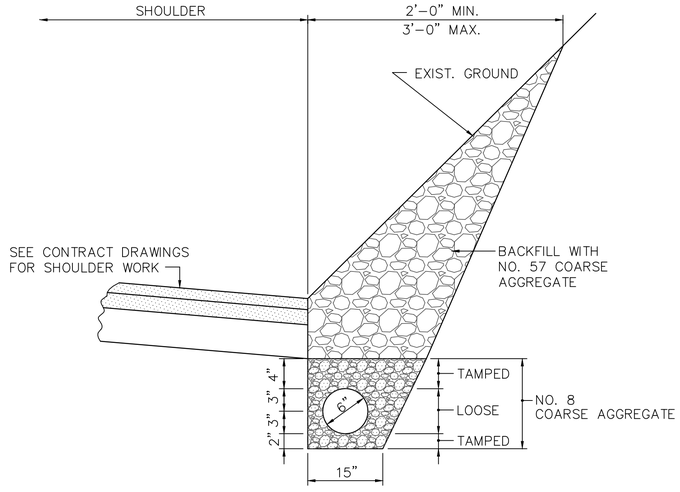
LIMITS OF MAINLINE PAVEMENT BASE DRAIN
AT SERVICE PLAZA AND INTERCHANGE RAMPS



MEDIAN BASE DRAIN
(REHABILITATION ONLY)



PAVEMENT BASE DRAIN WITH SLOPE DRAINAGE
TYPE I



PAVEMENT BASE DRAIN WITH SLOPE DRAINAGE
TYPE II

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

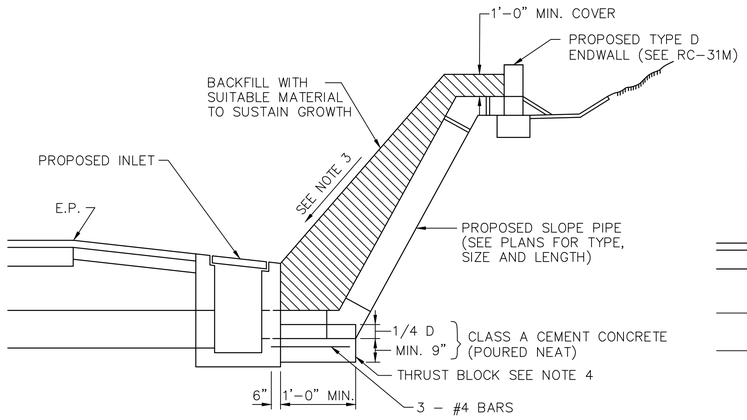
6" PAVEMENT BASE DRAIN & MEDIAN BASE DRAIN

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

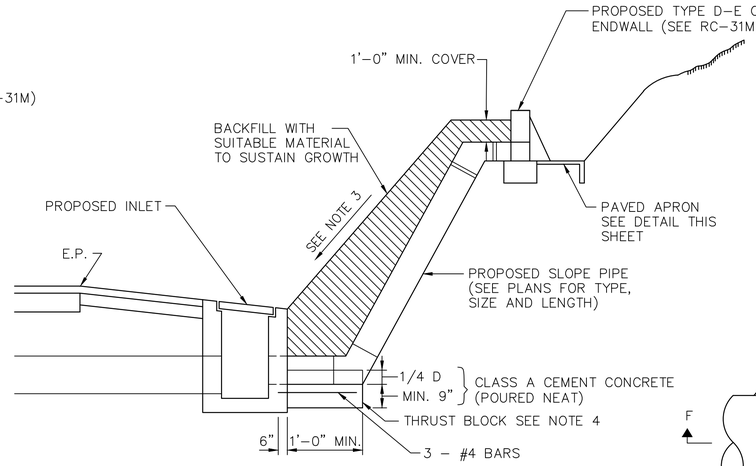
FILE NAME: PTS-123.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-123



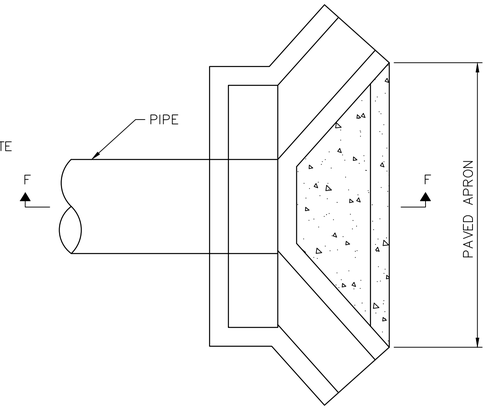
SECTION A-A
TYPE D ENDWALL



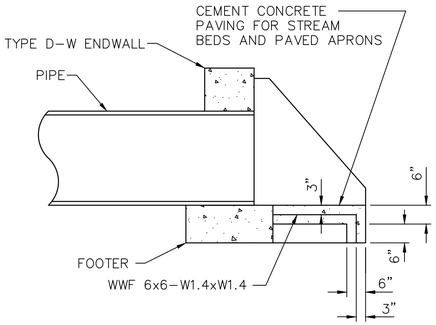
SECTION D-D
TYPE D-E OR E-S ENDWALLS

NOTES:

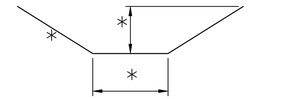
1. RESHAPE AND/OR REGRADE EXIST. SWALE
2. REGRADE DITCH IN AREA OF STREAM BED PAVING TO ENSURE THE FLOW LINE IS UNOBSTRUCTED.
3. MAX. SLOPE = 1 1/2:1. IF SLOPE IS STEEPER THAN 1 1/2:1 OR ROCK, DETAILS MUST BE PROVIDED IN THE CONTRACT DRAWINGS.
4. THRUST BLOCK IS INCIDENTAL TO SLOPE PIPE.
5. PLACE A SLOPE PIPE ANCHOR, AS SHOWN ON SHEET 4 OF 4 EVERY 20-FEET ALONG THE PIPE OR AT THE PIPE JOINTS AS DIRECTED BY THE REPRESENTATIVE. SLOPE PIPE ANCHORS ARE INCIDENTAL TO THE SLOPE PIPE.



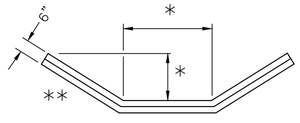
PLAN VIEW
TYPE D-W ENDWALL



SECTION F-F
TYPE D-W ENDWALL

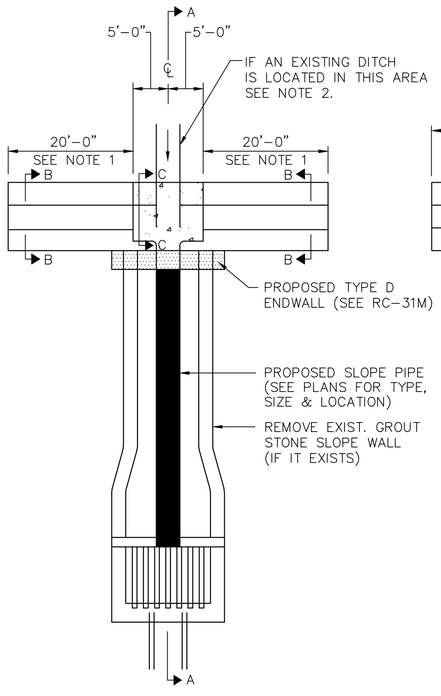


SECTION B-B
TYPICAL SECTION EARTH SWALE
* MATCH EXIST. FIELD CONDITIONS

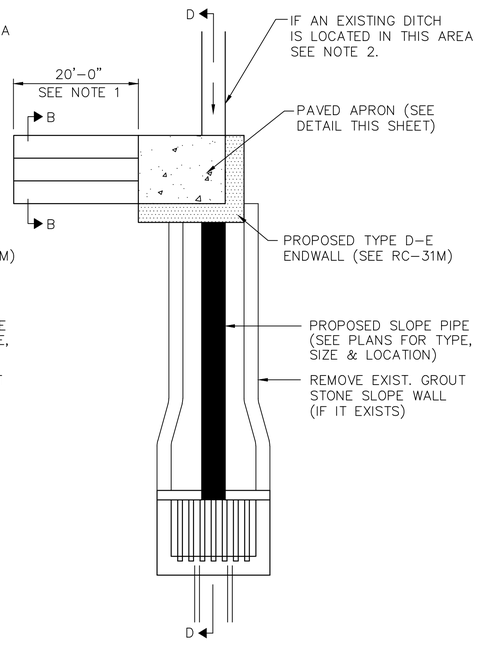


SECTION C-C
TYPICAL SECTION CONCRETE SWALE
(SEE RC-40M FOR ALL OTHER DETAILS OF CEMENT CONCRETE PAVING FOR STREAM BEDS)

* MATCH EXIST. FIELD CONDITIONS
** IF AN EXIST. DITCH IS LOCATED PERPENDICULAR TO THE HEADWALL THEN TRANSITION STREAM BED PAVING TO ALLOW FOR PROPER FLOW.



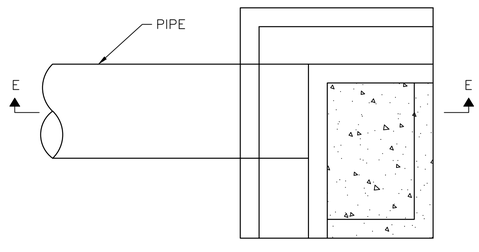
PLAN VIEW
TYPE D ENDWALL



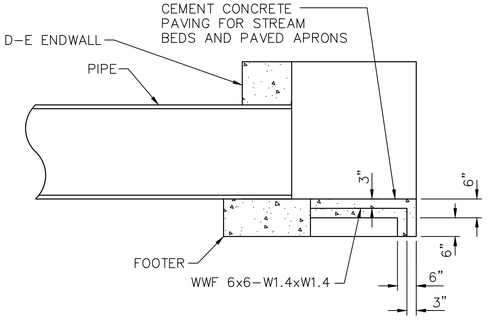
PLAN VIEW
TYPE D-E & E-S ENDWALLS

INSTALLATION OF SLOPE PIPES & ENDWALLS
CUT CONDITION

PAVED APRON FOR TYPE D-W ENDWALLS
(SEE RC-31M FOR ENDWALL DETAILS)



PLAN VIEW
TYPE D-E ENDWALL



SECTION E-E
TYPE D-E ENDWALL

PAVED APRON FOR TYPE D-E & E-S ENDWALLS
(SEE RC-31M FOR ENDWALL DETAILS)

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

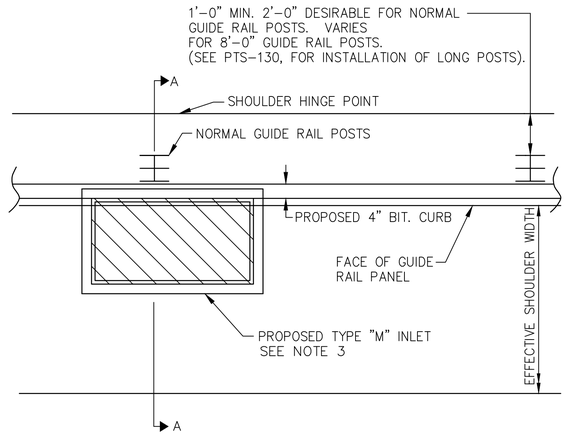
STANDARD DRAINAGE DETAILS

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-124-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 5

DATE: JANUARY 2019

PTS-124

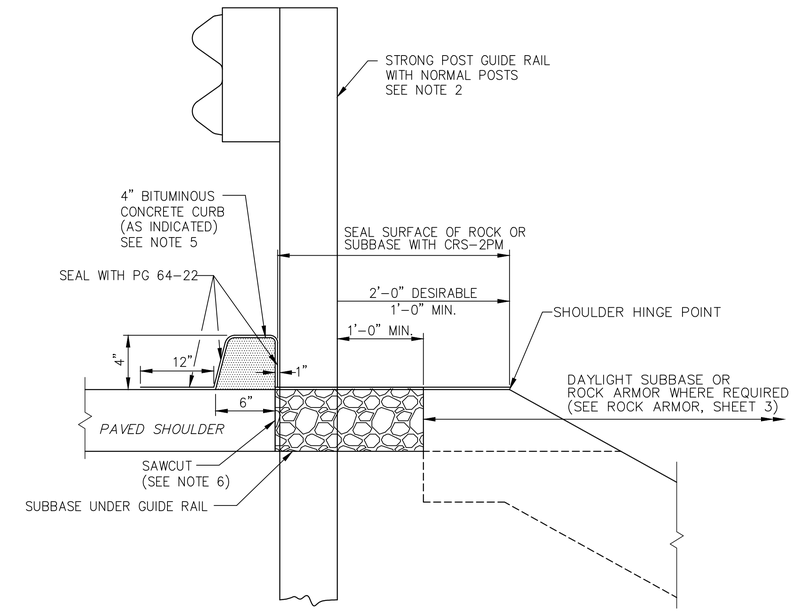


PLACEMENT OF TYPE "M" INLETS WITH BITUMINOUS CURB

SEE NOTE 4

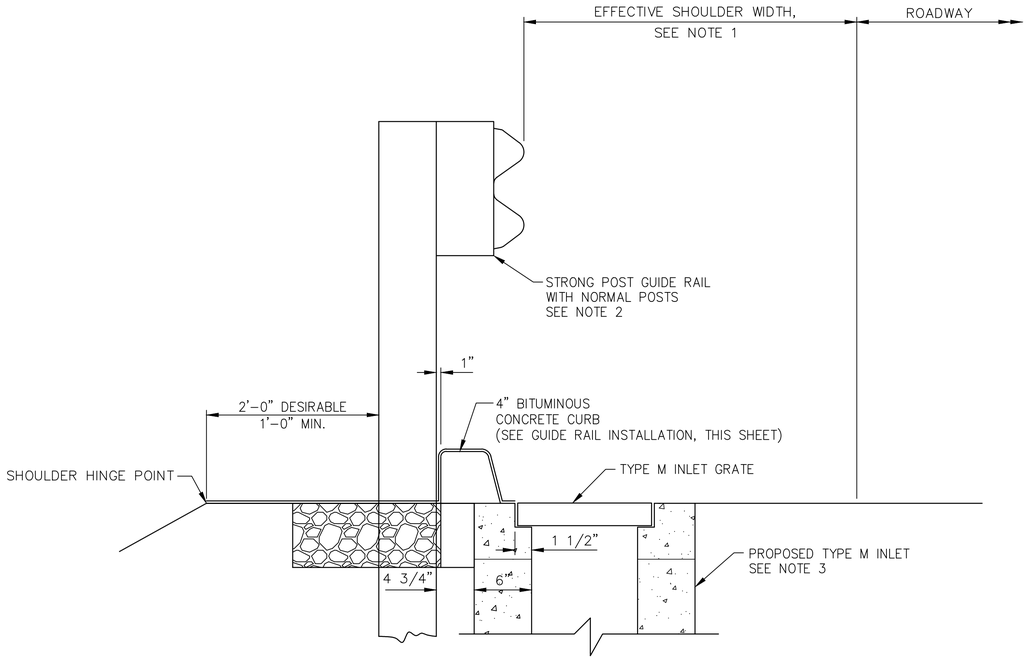
NOTES:

1. SEE CONTRACT DRAWINGS FOR PROPOSED EFFECTIVE SHOULDER WIDTHS (TYPICALLY 12'-0" DESIRABLE, 10'-0" MINIMUM).
2. IN AREAS WHERE THE PROPOSED EFFECTIVE SHOULDER WIDTH CANNOT BE ACHIEVED USING NORMAL GUIDE RAIL POSTS WITH 1-FOOT MINIMUM WIDTH TO THE HINGE POINT, USE 8'-0" POSTS AS SHOWN ON PTS-130, TO MAXIMIZE THE SHOULDER WIDTH.
3. SUMP INLET 1-INCH BELOW THE PROPOSED SHOULDER GRADE IF THE TRAFFIC CONTROL FOR THE PROJECT DOES NOT REQUIRE TRAFFIC TO RUN ON THE SHOULDER.
4. EXTEND THE BITUMINOUS CURB A MINIMUM OF 5-FEET BEYOND THE INLET OR AS DIRECTED BY THE REPRESENTATIVE WHEN THE CURB ENDS AT AN INLET.
5. ALTERNATE CONFIGURATIONS OF BITUMINOUS CONCRETE CURB ARE ACCEPTABLE WITH THE APPROVAL OF THE REPRESENTATIVE.
6. SAWCUT, IF NECESSARY, TO PROVIDE A VERTICAL FACE FOR SUBBASE UNDER GUIDE RAIL TO ACCOMMODATE INSTALLATION OF GUIDE RAIL POSTS.



SECTIONAL VIEW

GUIDE RAIL INSTALLATION DETAIL – FILL CONDITION



SECTION A-A

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: DECEMBER 29, 2017

CHIEF ENGINEER

STANDARD DRAINAGE DETAILS

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

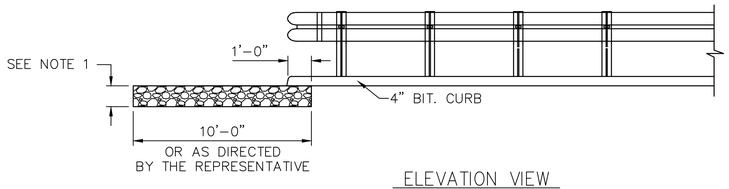
FILE NAME: PTS-124-2.dwg

DRAWING TYPE: 5A

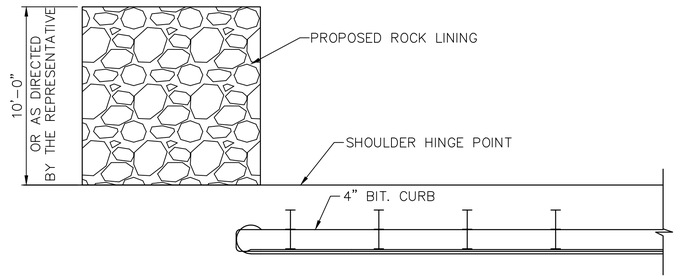
SHEET 2 OF 5

DATE: JANUARY 2019

PTS-124



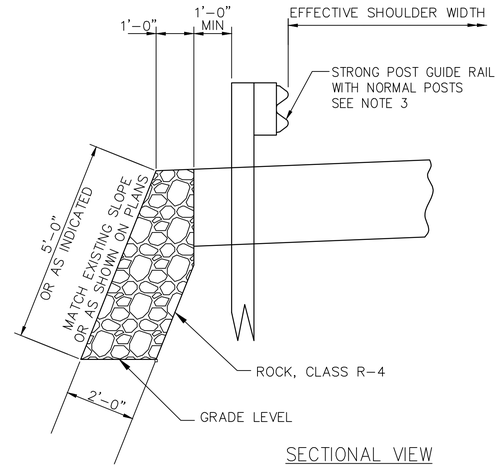
ELEVATION VIEW



PLAN VIEW

ROCK PAD DETAIL

SEE NOTE 2

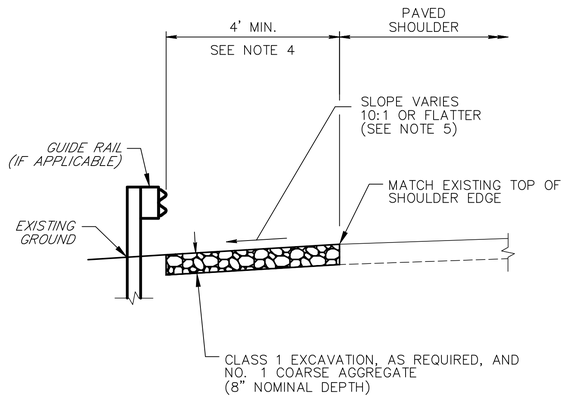


SECTIONAL VIEW

ROCK ARMOR DETAIL

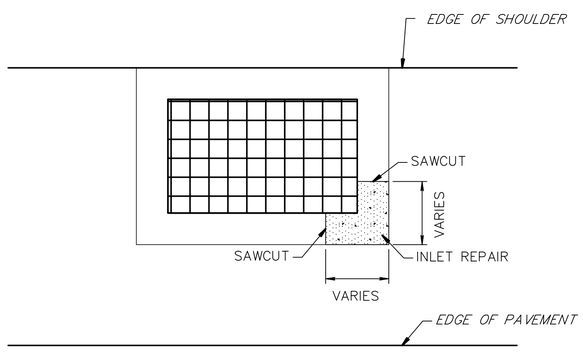
NOTES:

1. PLACE ROCK OF THE SIZE INDICATED ON THE PLANS AND TO THE REQUIRED THICKNESS AS SPECIFIED IN SECTION 850.2.
2. INSTALL ROCK PADS AT LOCATIONS INDICATED ON THE PLANS AND AT THE DOWNGRADE END OF CUT SLOPES (CUT TO FILL POINT) AS DIRECTED BY THE REPRESENTATIVE.
3. IN AREAS WHERE THE PROPOSED EFFECTIVE SHOULDER WIDTH CANNOT BE ACHIEVED USING NORMAL GUIDE RAIL POSTS WITH 1-FOOT MINIMUM WIDTH TO THE HINGE POINT, USE 8'-0" POSTS AS SHOWN ON PTS-130, TO MAXIMIZE THE SHOULDER WIDTH.
4. 4' MINIMUM WIDTH WITHOUT GUIDE RAIL. WIDTH VARIES WITH GUIDE RAIL FROM BACK EDGE OF PAVED SHOULDER TO FACE OF GUIDE RAIL.
5. REGRADE CROSS SLOPE PER PLAN OR MATCH EXISTING SLOPES TO ENSURE POSITIVE DRAINAGE FLOW.



SECTIONAL VIEW

SHOULDER BACKUP



PLAN VIEW

INLET REPAIR DETAIL

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: DECEMBER 29, 2017

CHIEF ENGINEER

STANDARD DRAINAGE DETAILS

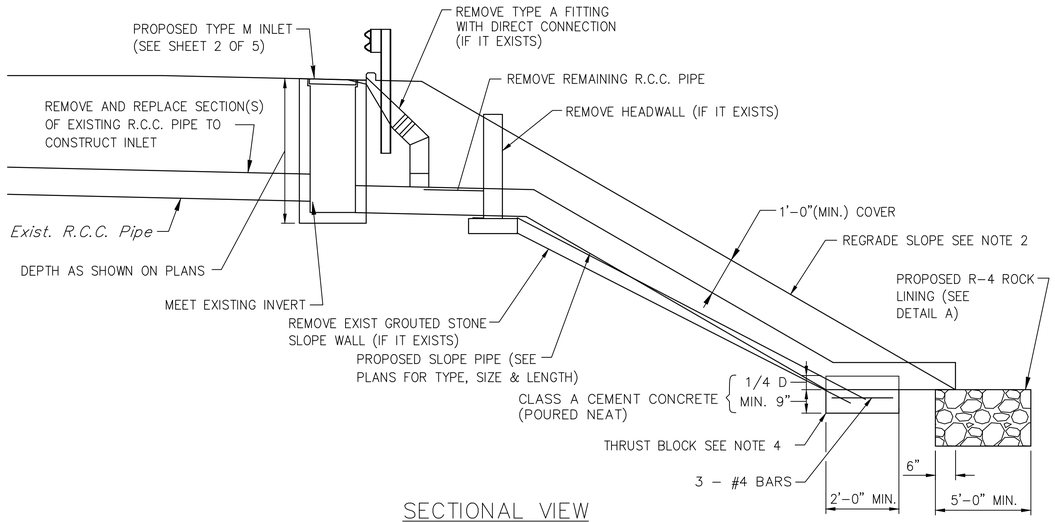
PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

FILE NAME: PTS-124-2.dwg
DRAWING TYPE: 5A

SHEET 3 OF 5

DATE: JANUARY 2019

PTS-124



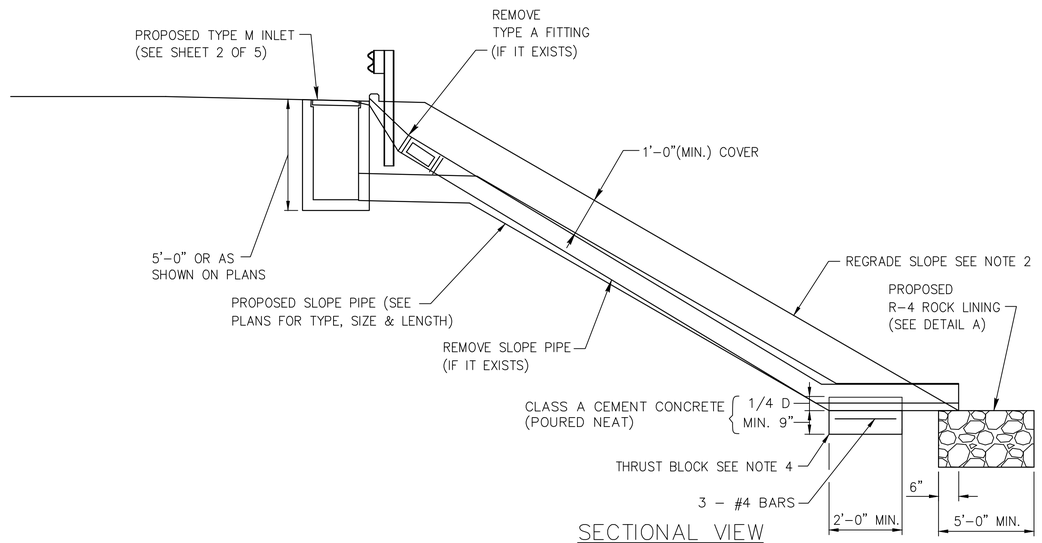
SECTIONAL VIEW

INSTALLATION OF TYPE M INLET AND SLOPE PIPE

(EXISTING CROSS PIPE LOCATION)

NOTES:

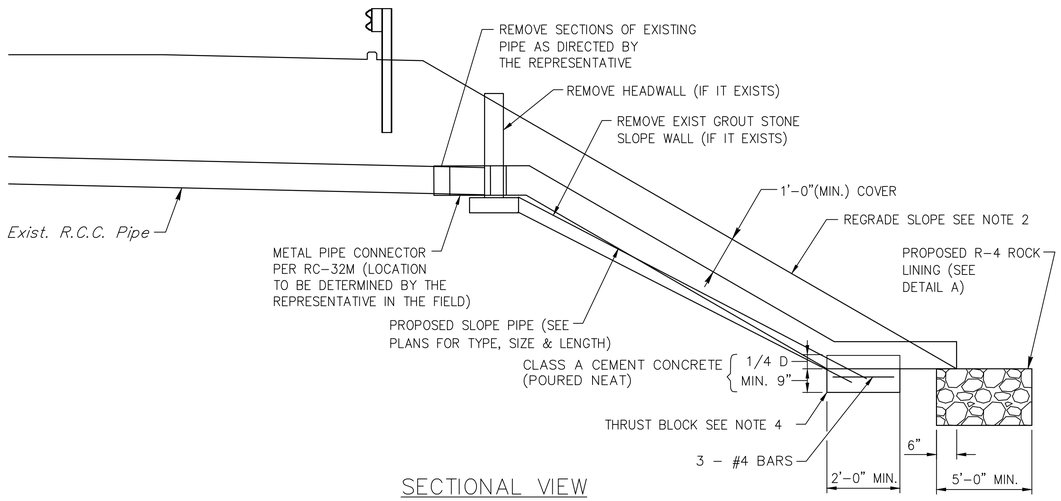
1. REMOVAL OF EXISTING PIPES, TYPE A FITTINGS, HEADWALLS AND STONE SLOPE WALLS ARE INCIDENTAL TO THE PROPOSED WORK.
2. REGRADE AREA OF SLOPE PIPE INSTALLATION TO MEET ADJACENT CONTOURS AND INSTALL EROSION CONTROL MEASURES TO STABILIZE THE AREA.
3. PLACE A SLOPE PIPE ANCHOR, AS SHOWN ON SHEET 5 OF 5 EVERY 20-FEET ALONG THE PIPE OR AT THE PIPE JOINTS AS DIRECTED BY THE REPRESENTATIVE. SLOPE PIPE ANCHORS ARE INCIDENTAL TO THE SLOPE PIPE.
4. THRUST BLOCK IS INCIDENTAL TO SLOPE PIPE.



SECTIONAL VIEW

INSTALLATION OF TYPE M INLET AND SLOPE PIPE

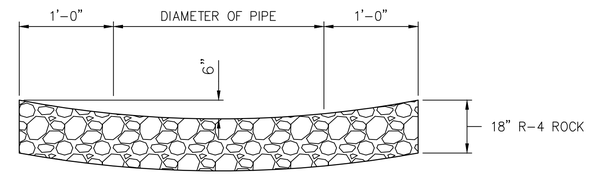
(NEW LOCATION OR AT EXISTING TYPE A FITTING)



SECTIONAL VIEW

INSTALLATION OF SLOPE PIPE

(EXTENSION OF EXISTING CROSS PIPE)



DETAIL A

TYPICAL SECTION OF ROCK LINING AT SLOPE PIPE OUTLETS

(PIPES 15" OR GREATER)

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

STANDARD DRAINAGE DETAILS

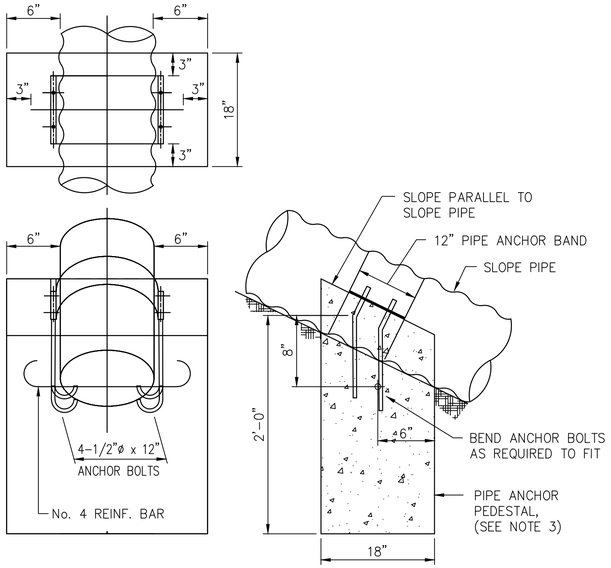
PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

FILE NAME: PTS-124-3.dwg
DRAWING TYPE: 5A

SHEET 4 OF 5

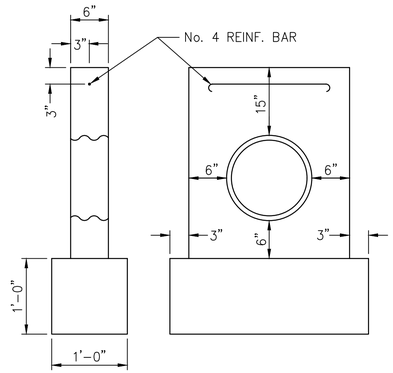
DATE: JANUARY 2019

PTS-124



PIPE ANCHOR FOR ABOVE GROUND INSTALLATION

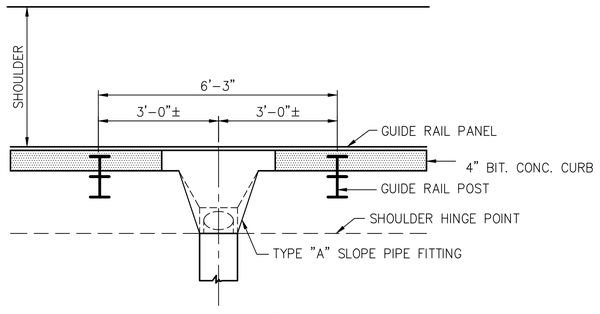
SEE NOTE 1



SLOPE PIPE ANCHOR DETAIL

NOTES:

1. PLACE ONE PIPE ANCHOR FOR ABOVE GROUND INSTALLATION AT EACH PIPE JOINT OR AS DIRECTED BY THE REPRESENTATIVE WHEN INSTALLING PIPES ON THE SURFACE OF SLOPES.
2. SLOPE PIPE ANCHORS ARE INCIDENTAL TO THE SLOPE PIPE.
3. CONSTRUCT PEDESTAL USING CLASS A CEMENT CONCRETE IN ACCORDANCE WITH SECTION 704.



PLAN VIEW

INSTALLATION OF SLOPE PIPE FITTING

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

STANDARD DRAINAGE DETAILS

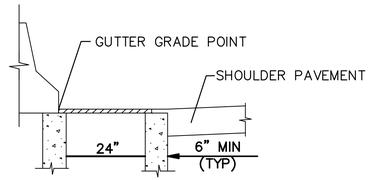
PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

FILE NAME: PTS-124-4.dwg
DRAWING TYPE: 5A

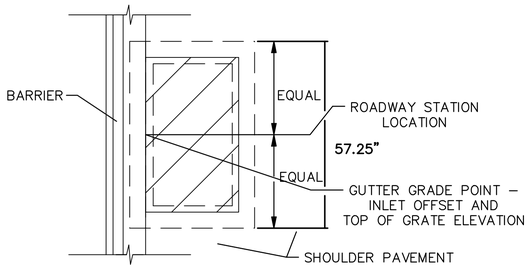
SHEET 5 OF 5

DATE: JANUARY 2019

PTS-124

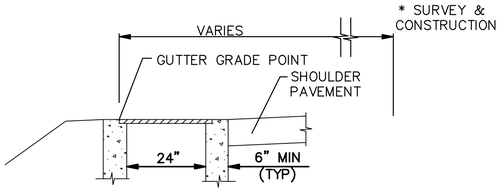


TYPE M INLET LOCATION DETAIL
ELEVATION VIEW
NOT TO SCALE

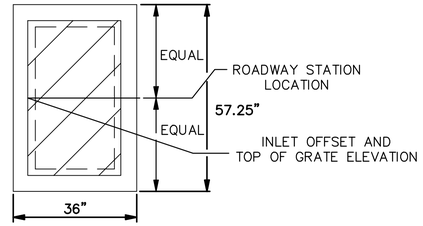


TYPE M INLET LOCATION DETAIL
PLAN VIEW
NOT TO SCALE

TYPE M INLET LOCATION DETAIL – AT BARRIER

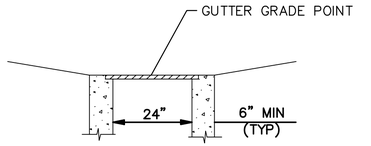


TYPE M INLET LOCATION DETAIL
ELEVATION VIEW
NOT TO SCALE

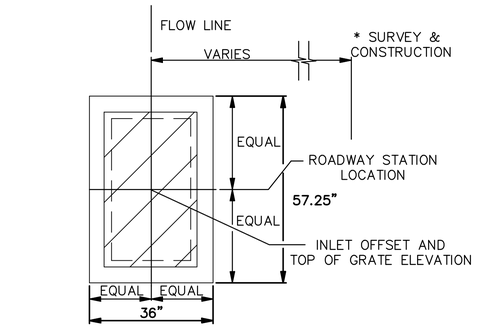


TYPE M INLET LOCATION DETAIL
PLAN VIEW
NOT TO SCALE

TYPE M INLET LOCATION DETAIL – IN FILL SHOULDERS

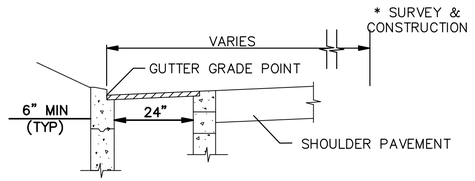


TYPE M INLET LOCATION DETAIL
ELEVATION VIEW
NOT TO SCALE

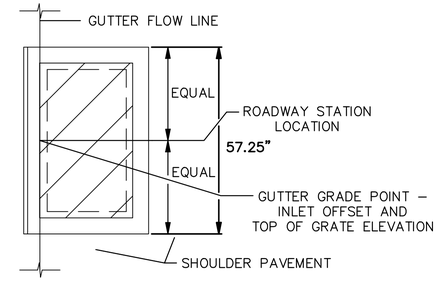


TYPE M INLET LOCATION DETAIL
PLAN VIEW
NOT TO SCALE

TYPE M INLET LOCATION DETAIL – AT CONCENTRATED FLOWS

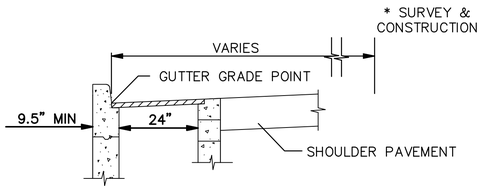


TYPE S INLET LOCATION DETAIL
ELEVATION VIEW
NOT TO SCALE

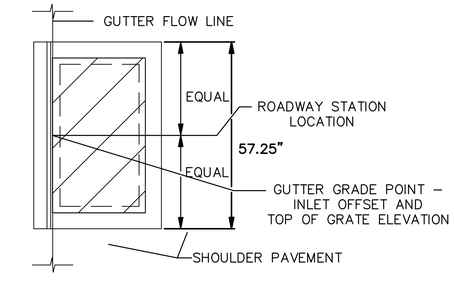


TYPE S INLET LOCATION DETAIL
PLAN VIEW
NOT TO SCALE

TYPE S INLET LOCATION DETAIL

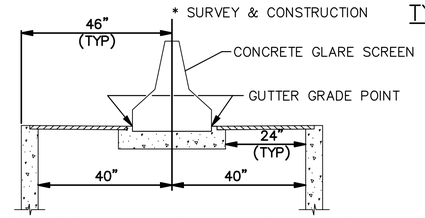


TYPE C INLET LOCATION DETAIL
ELEVATION VIEW
NOT TO SCALE

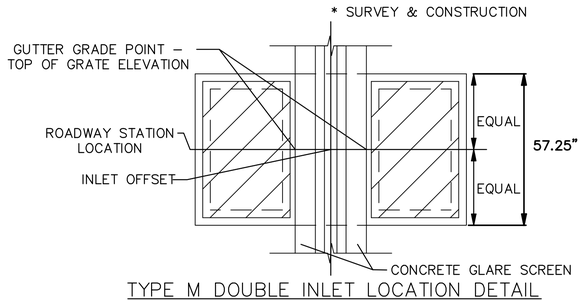


TYPE C INLET LOCATION DETAIL
PLAN VIEW
NOT TO SCALE

TYPE C INLET LOCATION DETAIL



TYPE M DOUBLE INLET LOCATION DETAIL
ELEVATION
NOT TO SCALE



TYPE M DOUBLE INLET LOCATION DETAIL
PLAN
NOT TO SCALE

TYPE M DOUBLE INLET LOCATION DETAIL

NOTES:

THE GUTTER GRADE POINT IS WHERE THE TOP OF GRATE ELEVATION IS APPLIED.

FOR TYPE M INLETS ADJACENT TO BARRIER, THE STATION, OFFSET AND GUTTER GRADE POINT ARE REFERENCED TO THE CENTER OF INLET AT THE FACE OF BARRIER. SEE PTS–121, CONSTRUCTION TYPE M INLET.

FOR TYPE M INLETS IN FILL SHOULDERS, THE STATION, OFFSET AND GUTTER GRADE POINT ARE REFERENCED TO THE CENTER OF THE INLET AT THE BACK OF GRATE.

FOR TYPE M INLETS AT CONCENTRATED FLOWS, THE STATION, OFFSET AND GUTTER GRADE POINT ARE REFERENCED TO THE CENTER OF THE INLET.

FOR TYPE S AND TYPE C INLETS, THE STATION, OFFSET AND GUTTER GRADE POINT ARE REFERENCED TO THE CENTER OF THE INLET AT THE BACK OF GRATE (FACE OF CURB).

FOR TYPE M DOUBLE INLETS, THE STATION AND OFFSET ARE REFERENCED TO THE CENTER OF THE INLET BOX (CENTER OF BARRIER). THE GUTTER GRADE POINT IS REFERENCED TO THE CENTER OF EACH INLET GRATE AT THE FACE OF BARRIER.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

INLET PLACEMENT

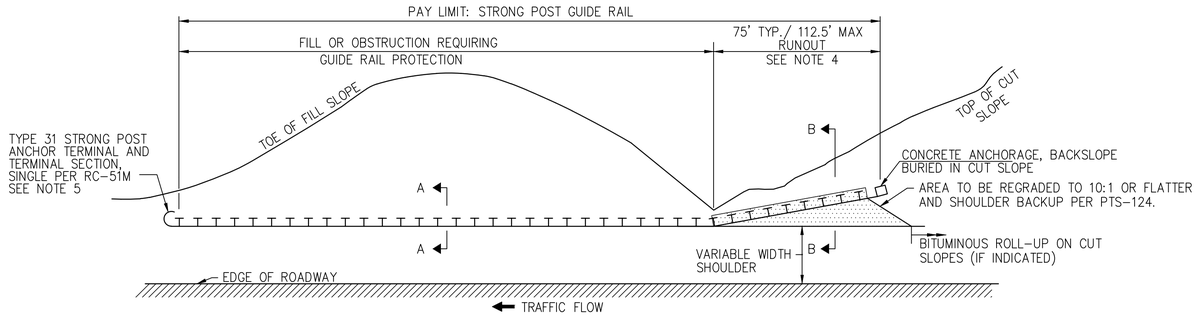
PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

FILE NAME: PTS-125.dwg
DRAWING TYPE: 5A

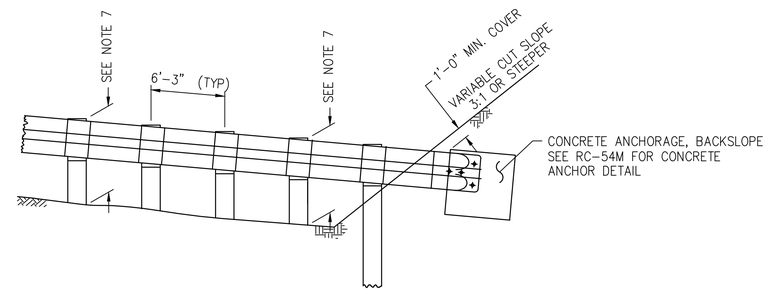
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-125

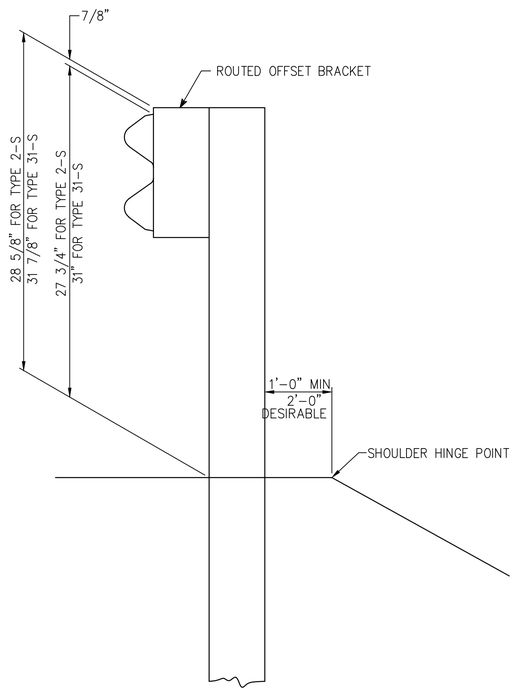


PLAN VIEW

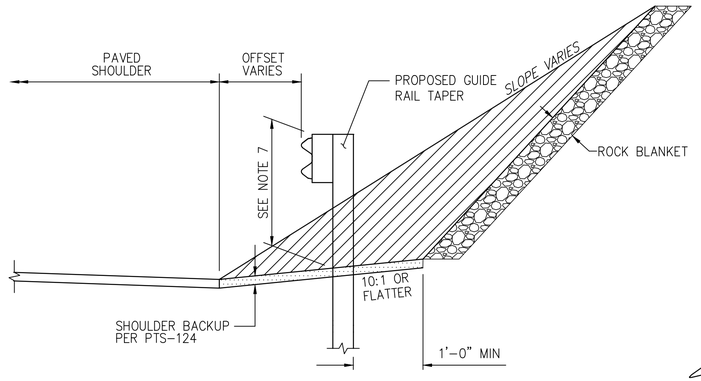


ELEVATION VIEW

GUIDE RAIL TAPER TO END ANCHORAGE AND REGRADING AREA

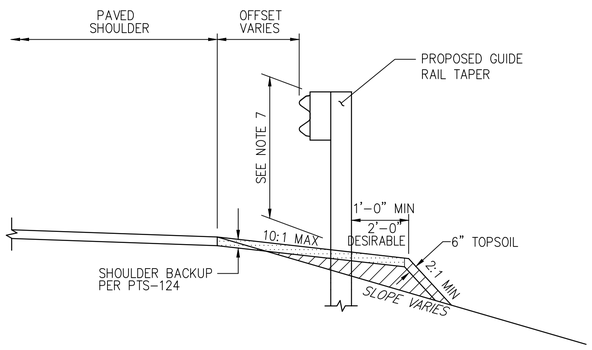


SECTION A-A: TYPICAL GUIDE RAIL INSTALLATION



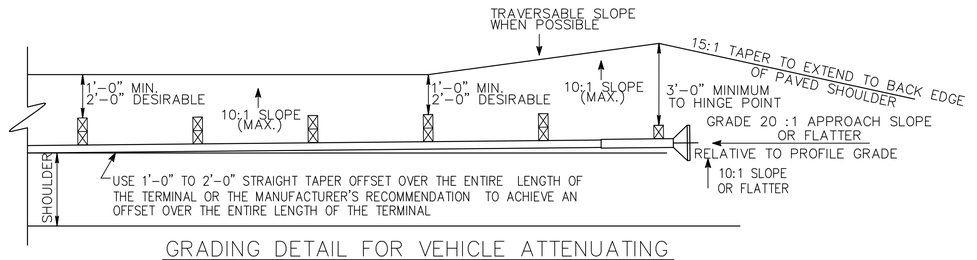
SECTION B-B

CUT CONDITION IN TAPER TO BURY IN CUT SLOPE



SECTION B-B

FILL CONDITION IN TAPER TO BURY IN CUT SLOPE



GRADING DETAIL FOR VEHICLE ATTENUATING TERMINAL END TREATMENTS (V.A.T.E.T.) TANGENT

NOTES:

1. PROVIDE MATERIALS AS PER RC-51M, PTS-130, SHEET 5 OF 5 AND IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 620. USE W6 x 8.5 OR 9 POSTS.
2. GALVANIZE ALL HARDWARE, GUIDE RAIL MATERIAL AND POSTS IN ACCORDANCE WITH SECTION 1109.
3. IF THE GUIDE RAIL CANNOT BE BURIED INTO THE CUT SLOPE, THEN TERMINATE THE APPROACH END OF GUIDE RAIL WITH AN APPROVED VEHICLE ATTENUATING TERMINAL END TREATMENT AS INDICATED ON THE PLANS, AS SHOWN ON THE GRADING DETAIL AND AS SPECIFIED IN SECTION 620.
4. RUNOUT MAY BE PARALLEL, AT A 15:1 TAPER RATE OR A COMBINATION OF THE TWO.
5. WHERE A TYPE 31 STRONG POST ANCHOR TERMINAL CANNOT BE INSTALLED, EXTEND THE GUIDE RAIL A MINIMUM OF 50 FEET BEYOND THE OBSTRUCTION AND INSTALL A TERMINAL SECTION, SINGLE AT THE DIRECTION OF THE REPRESENTATIVE.
6. FOR LOCATIONS WITH A ROADSIDE SWALE, SEE RC-54M.
7. MAINTAIN REQUIRED HEIGHT OF THE W-BEAM RAIL ABOVE SHOULDER OR FINISHED GRADE.

PENNA TURN-PIKE

RECOMMENDED: JUNE 14, 2018
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JUNE 18, 2018
CHIEF ENGINEER

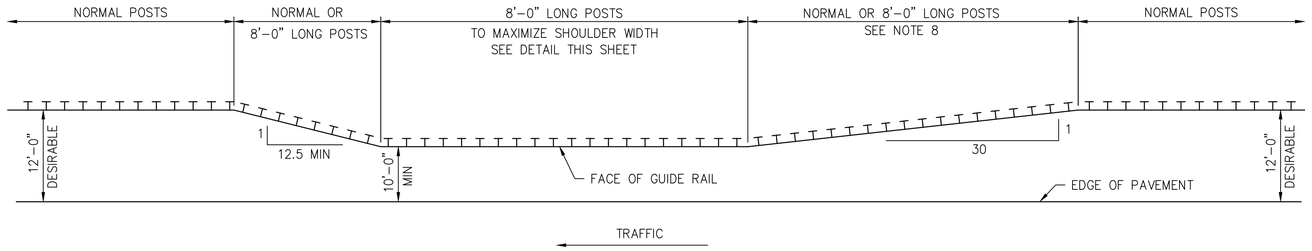
STRONG POST GUIDE RAIL INSTALLATION

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-130-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 5

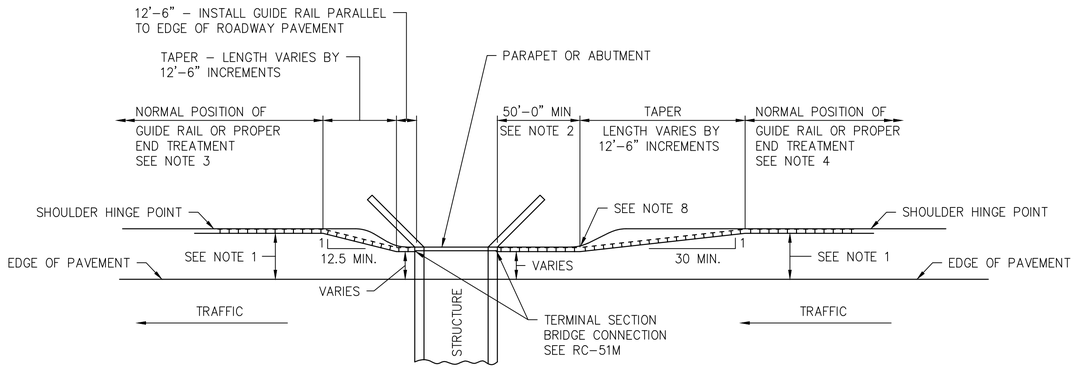
DATE: JANUARY 2019

PTS-130

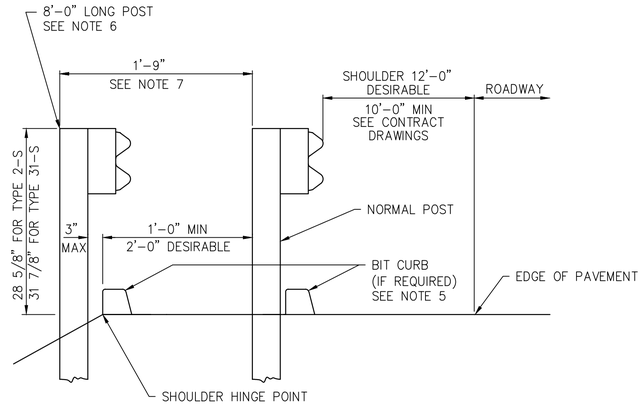


PLAN VIEW

ALLOWABLE TAPER IN CONTINUOUS RUN OF GUIDE RAIL



PLAN VIEW

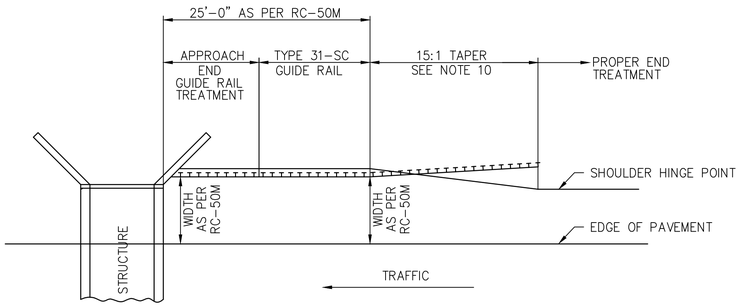


8'–0" LONG POST LOCATION DETAIL

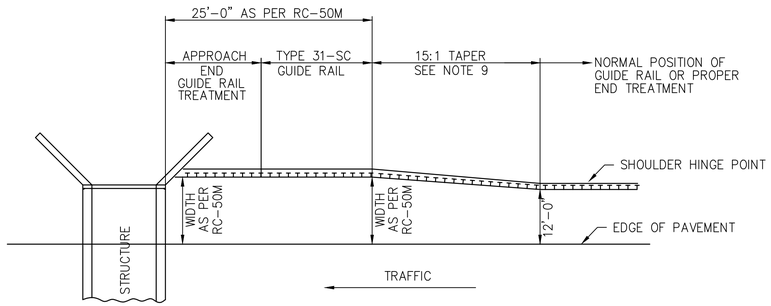
NOTES:

1. 12'–0" DESIRABLE, 10'–0" MIN, SEE CONTRACT DRAWINGS FOR PROPOSED SHOULDER WIDTH.
2. INSTALL GUIDE RAIL PARALLEL TO EDGE OF ROADWAY PAVEMENT. SEE APPROACH END TRANSITION DETAILS FOR ATTACHMENT TO STRUCTURE.
3. GUIDE RAIL IS NOT REQUIRED ON TRAILING ENDS OF STRUCTURES UNLESS WARRANTED BY OTHER OBSTRUCTIONS.
4. INSTALL MINIMUM OF 25 FEET OF STRONG POST GUIDE RAIL PARALLEL TO EDGE OF ROADWAY IF A VEHICLE ATTENUATING TERMINAL (V.A.T.E.T.) END TREATMENT IS TO BE USED.
5. IF REQUIRED, CONSTRUCT BITUMINOUS CURB PARALLEL TO THE GUIDE RAIL ALIGNMENT.
6. USE W6 x 8.5 OR 9 POSTS IN ACCORDANCE WITH RC–51M, 8'–0" LENGTH.
7. IF 1'–0" MINIMUM CLEAR WIDTH CANNOT BE MAINTAINED BEHIND THE NORMAL GUIDE RAIL POST FOR THE PROPER SHOULDER WIDTH, THEN USE LONG POSTS IN THIS AREA.
8. INSTALL A OM–3R "RIGHT CLEARANCE MARKER" AT THE POINT WHERE THE GUIDE RAIL TAPER BEGINS. HEIGHT = 18 INCHES FROM TOP OF GUIDE RAIL TO BOTTOM OF SIGN.
9. TRANSITION HORIZONTAL OFFSET FROM RC–50M TO THE 12'–0" CLEARANCE CONSISTENTLY OVER 100'. MAINTAIN 2'–7" HEIGHT OF TYPE 31–S RAIL.
10. MAINTAIN 2'–7" HEIGHT OF RAIL. PROVIDE PROPER END TREATMENT. DO NOT INSTALL A V.A.T.E.T. ON LESS THAN 100' TAPER.

PLACEMENT OF GUIDE RAIL AT STRUCTURES WITH LESS THAN STANDARD HORIZONTAL CLEARANCE

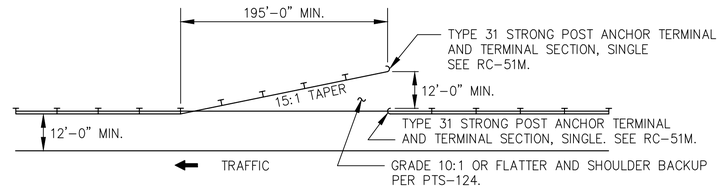


PLAN VIEW



PLAN VIEW

PLACEMENT OF GUIDE RAIL AT STRUCTURES WITH STANDARD HORIZONTAL CLEARANCE



PLAN VIEW

MAINTENANCE OPENING

PENNA TURN-PIKE

RECOMMENDED: JUNE 14,2018
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JUNE 18, 2018
CHIEF ENGINEER

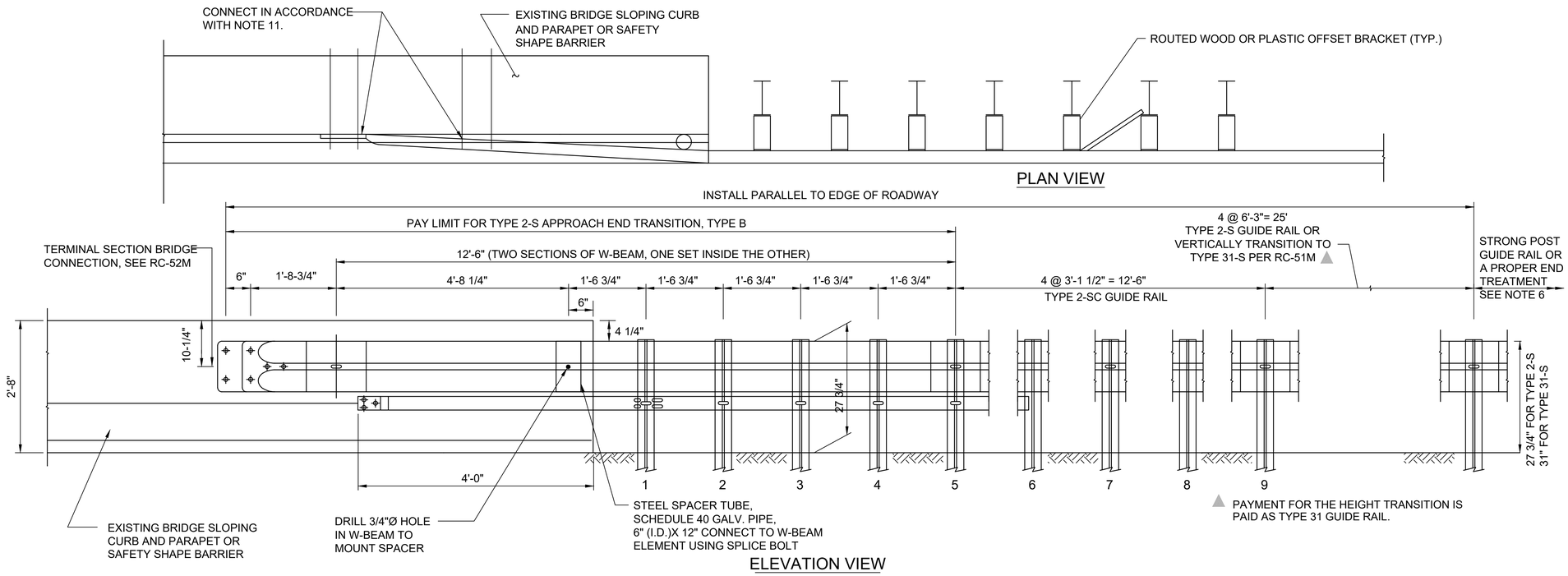
STRONG POST GUIDE RAIL INSTALLATION (GUIDE RAIL TAPERS & LONG POSTS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

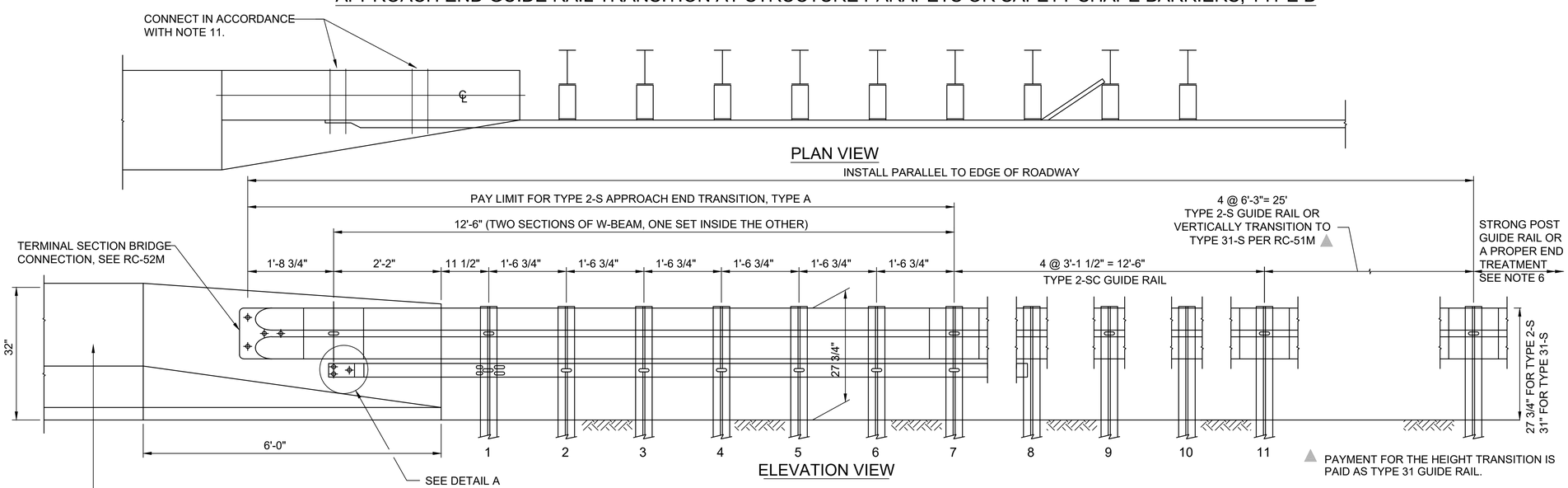
FILE NAME: PTS-130-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 5

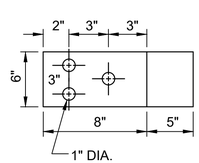
DATE: JANUARY 2019

PTS-130



APPROACH END GUIDE RAIL TRANSITION AT STRUCTURE PARAPETS OR SAFETY SHAPE BARRIERS, TYPE B





DETAIL A

APPROACH END GUIDE RAIL TRANSITION AT STRUCTURE PARAPETS, TYPE A

NOTES:

1. PROVIDE MATERIALS AS PER RC-51M, PTS-130, SHEET 5 OF 5 AND IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 620. USE EITHER W6 X 8.5 OR 9 POSTS.
2. GALVANIZE ALL HARDWARE, GUIDE RAIL MATERIAL AND POSTS IN ACCORDANCE WITH SECTION 1109.
3. TERMINAL SECTION, BRIDGE CONNECTIONS MUST BE ATTACHED FLUSH WITH FACE OF PARAPETS, OR SAFETY SHAPE BARRIERS.
4. PROVIDE #1, 2 & 3 POSTS 8'-0" LONG, #4 THROUGH 6 POSTS 7'-0" LONG AND #7 THROUGH 11 POSTS 6'-0" LONG.
5. GUIDE RAIL IS NOT REQUIRED ON TRAILING ENDS OF STRUCTURES UNLESS WARRANTED BY OTHER OBSTRUCTIONS.
6. INSTALL A MINIMUM OF 25'-0" OF GUIDE RAIL PARALLEL TO EDGE OF ROADWAY IF A VEHICLE ATTENUATING TERMINAL END TREATMENT (V.A.T.E.T.) IS TO BE USED.
7. IF REQUIRED, CONSTRUCT BITUMINOUS CONCRETE CURB PARALLEL TO THE GUIDE RAIL ALIGNMENT.
8. CONFIGURATIONS AND HEIGHTS OF EXISTING PARAPETS AND SAFETY SHAPE BARRIERS MAY VARY.
9. W-BEAM ELEMENT IS BOLTED TO ALL POSTS.
10. PROVIDE RUB RAIL AS PER RC-50M AND PTS-130, SHEET 5 OF 5. BOLT RUB RAIL TO POST WITHOUT WASHER.
11. IF A NEW PARAPET IS BEING POURED, CONNECT THE GUIDE RAIL AND RUB RAIL AS SHOWN ON BC-734M. IF CONNECTING TO AN EXISTING PARAPET OR SAFETY SHAPE BARRIER, USE ONE OF THE FOLLOWING TO CONNECT THE GUIDE RAIL AND RUB RAILS:

a) THRU-BOLT THROUGH PARAPET WITH 7/8"Ø BOLTS AND A 12"X 12"X 1/2" STEEL PLATE FOR THE GUIDE RAIL AND A 7"X 7"X 1/2" STEEL PLATE FOR THE RUB RAIL; OR

b) ANCHOR INTO PARAPET WITH 7/8"Ø HIGH STRENGTH, HOT-DIP GALVANIZED ALL THREAD ANCHORS AND SET WITH KELI-GROUT AS MANUFACTURED BY KELKEN-GOLD INSTALLED IN ACCORDANCE WITH THEIR RECOMMENDATIONS OR AN APPROVED EQUAL.

12. TERMINAL SECTION AND RUBBING RAIL END MUST BE ATTACHED FLUSH WITH BARRIER. INSTALLATION MAY BE GREATLY SIMPLIFIED BY FABRICATING OR SHOP TWISTING TO BE CONSISTENT WITH THE SLOPE OF SAFETY SHAPE.
13. PAYMENT FOR THE APPROACH END TRANSITION, TYPES A & B, INCLUDES THE TWO 12'-6" SECTIONS OF W-BEAM, POSTS, OFFSET BRACKETS, RUBBING RAIL, RUBBING RAIL CONNECTIONS, TERMINAL SECTION BRIDGE CONNECTION, STEEL SPACER TUBE AND ASSOCIATED HARDWARE.
14. POSTS WITH RUBBING RAIL ATTACHMENT REQUIRE AN ADDITIONAL HOLE.

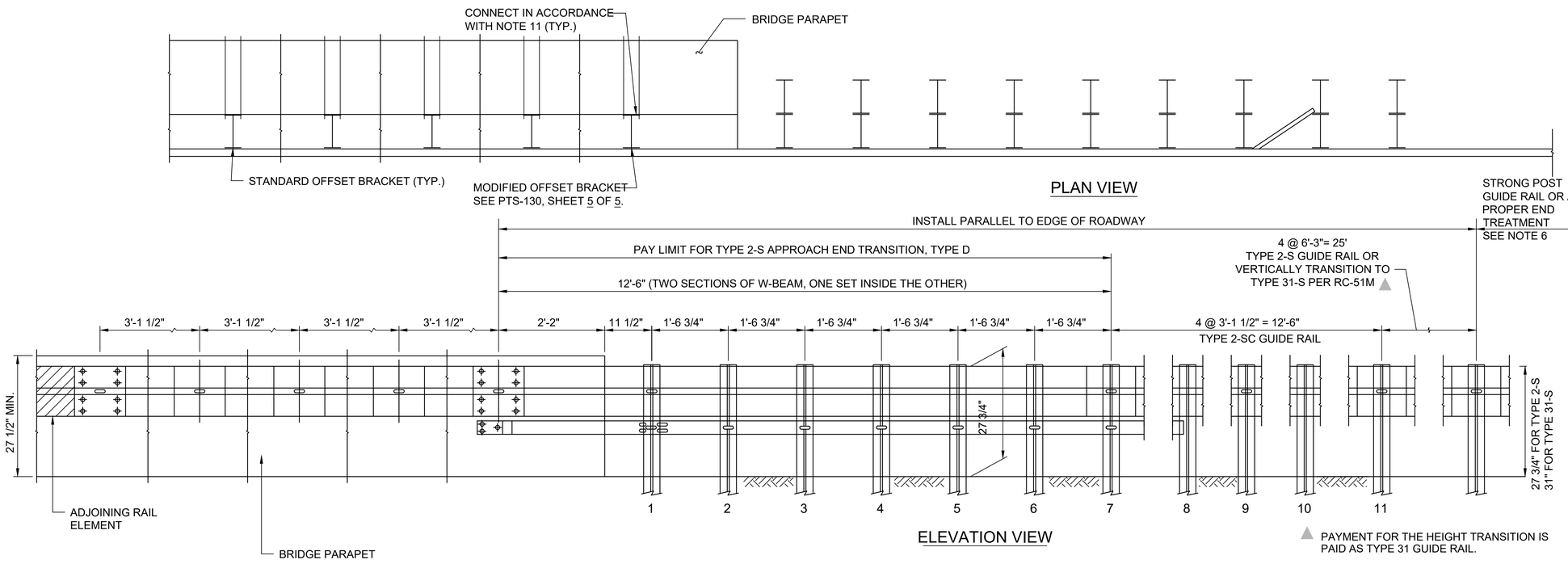
PENNA TURN-PIKE

RECOMMENDED: JUNE 14,2018
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JUNE 18, 2018
CHIEF ENGINEER

STRONG POST GUIDE RAIL INSTALLATION (APPROACH END GUIDE RAIL TRANSITIONS TYPE A & B)

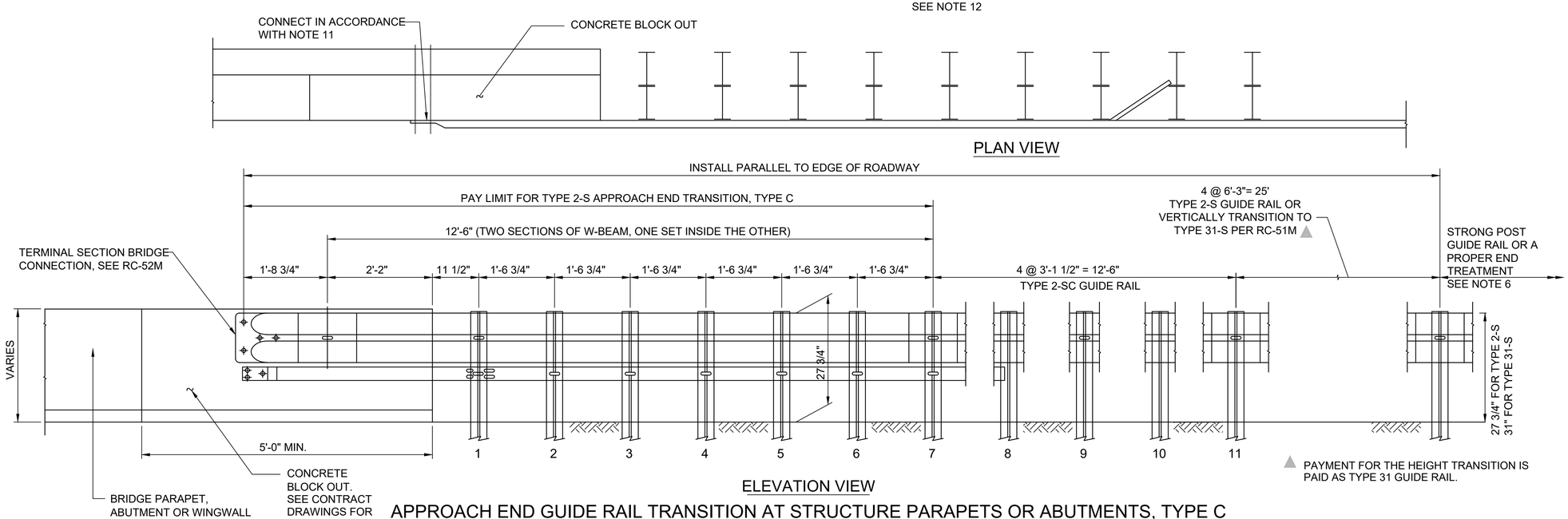
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-130-3.dwg
DRAWING TYPE: 5A
SHEET 3 OF 5
DATE: JANUARY 2019
PTS-130



PARAPET MOUNTED GUIDE RAIL AND APPROACH END GUIDE RAIL TRANSITION , TYPE D

SEE NOTE 12



APPROACH END GUIDE RAIL TRANSITION AT STRUCTURE PARAPETS OR ABUTMENTS, TYPE C

NOTES:

1. PROVIDE MATERIALS AS PER RC-51M, PTS-130, SHEET 5 OF 5 AND IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 620. USE EITHER W6 X 8.5 OR 9 POSTS.
2. GALVANIZE ALL HARDWARE, GUIDE RAIL MATERIAL AND POSTS IN ACCORDANCE WITH SECTION 1109.
3. TERMINAL SECTION, BRIDGE CONNECTIONS MUST BE ATTACHED FLUSH WITH FACE OF PARAPETS, OR ABUTMENTS.
4. PROVIDE #1, 2 & 3 POSTS 8'-0" LONG, #4 THROUGH 6 POSTS 7'-0" LONG AND #7 THROUGH 11 POSTS 6'-0" LONG.
5. GUIDE RAIL IS NOT REQUIRED ON TRAILING ENDS OF STRUCTURES UNLESS WARRANTED BY OTHER OBSTRUCTIONS.
6. INSTALL A MINIMUM OF 25'-0" OF GUIDE RAIL PARALLEL TO EDGE OF ROADWAY IF A VEHICLE ATTENUATING TERMINAL END TREATMENT (V.A.T.E.T.) IS TO BE USED.
7. IF REQUIRED, CONSTRUCT BITUMINOUS CONCRETE CURB PARALLEL TO THE GUIDE RAIL ALIGNMENT.
8. CONFIGURATIONS AND HEIGHTS OF EXISTING PARAPETS AND ABUTMENTS MAY VARY.
9. W-BEAM ELEMENT IS BOLTED TO ALL POSTS.
10. PROVIDE RUB RAIL AS PER RC-50M AND PTS-130, SHEET 5 OF 5. BOLT RUB RAIL TO POST WITHOUT WASHER.
11. IF CONCRETE BLOCK OUT IS 10" THICK OR GREATER, CONNECT GUIDE RAIL AND RUB RAIL AS SHOWN ON BC-734M. IF CONCRETE BLOCK IS LESS THEN 10" THICK USE ONE OF THE FOLLOWING TO CONNECT THE GUIDE RAIL AND RUB RAIL:
    a) THRU-BOLT THROUGH PARAPET WITH 7/8Ø BOLTS AND A 12"X 12"X 1/2" STEEL PLATE FOR THE GUIDE RAIL AND A 7"X7"X1/2" STEEL PLATE FOR THE RUB RAIL ; OR
    b) ANCHOR INTO PARAPET WITH 7/8"Ø HIGH STRENGTH, HOT-DIP GALVANIZED, ALL-THREAD ANCHORS AND SET WITH KELI-GROUT AS MANUFACTURED BY KELKEN-GOLD AND INSTALLED IN ACCORDANCE WITH THEIR RECOMMENDATIONS, OR AN APPROVED EQUAL.
12. THE FIRST OFFSET BRACKET ATTACHED TO THE PARAPET SHOULD BE AS SHOWN ON PTS-130, SHEET 5 OF 5 TO ACCOMMODATE CONNECTION OF RUB RAIL.
13. PAYMENT FOR THE APPROACH END TRANSITION, TYPE C INCLUDES THE TWO 12'-6" SECTIONS OF W-BEAM, POSTS, OFFSET BRACKETS, RUBBING RAIL, RUBBING RAIL CONNECTIONS, TERMINAL SECTION BRIDGE CONNECTION AND ASSOCIATED HARDWARE.
14. PAYMENT FOR THE APPROACH END TRANSITION, TYPE D INCLUDES THE TWO 12'-6" SECTIONS OF W-BEAM, POSTS, OFFSET BRACKETS, RUBBING RAIL, CONNECTIONS, AND ASSOCIATED HARDWARE.
15. PAYMENT FOR TYPE 2-S GUIDE RAIL PARAPET MOUNTED INCLUDES THE RAIL ELEMENT, OFFSET BRACKETS, CONNECTIONS AND ASSOCIATED HARDWARE.
16. CONCRETE BLOCK OUT IS A SEPARATE PAY ITEM. SEE CONTRACT DRAWINGS FOR DETAILS.
17. POSTS WITH RUBBING RAIL ATTACHMENT REQUIRE AN ADDITIONAL HOLE.

PENNA TURN-PIKE

RECOMMENDED: JUNE 14,2018
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JUNE 18,2018
CHIEF ENGINEER

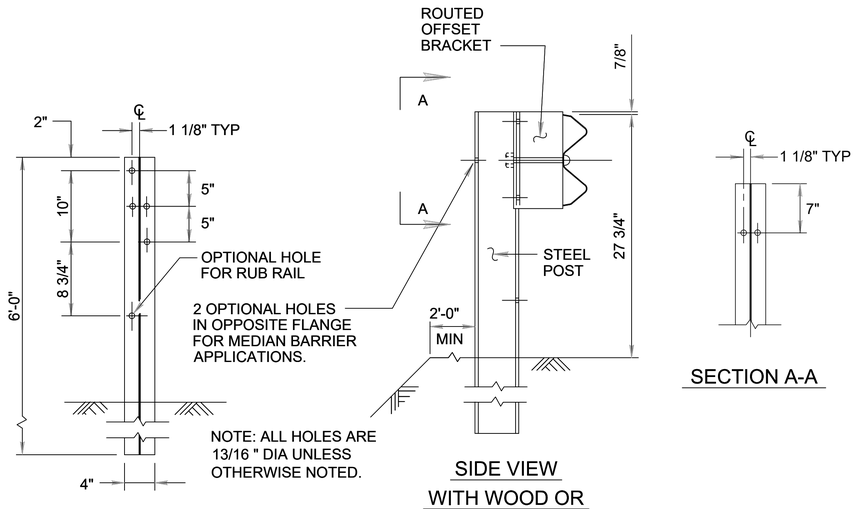
STRONG POST GUIDE RAIL INSTALLATION (APPROACH END GUIDE RAIL TRANSITIONS TYPE C & D)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-130-4.dwg
DRAWING TYPE: 5A
SHEET 4 OF 5

DATE: JANUARY 2019

PTS-130

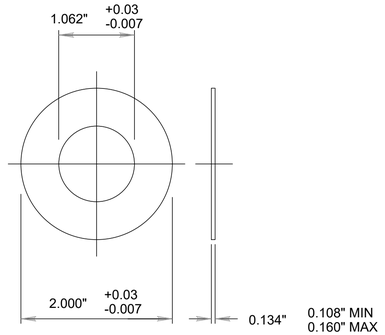


FRONT

SIDE VIEW
WITH WOOD OR
PLASTIC BRACKET

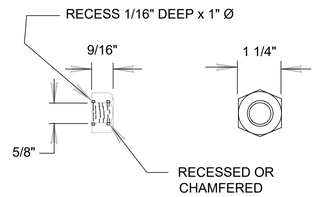
SECTION A-A

TYPE 2 GUIDE RAIL
W6 x 8.5 or W6 X 9.0 POST DETAILS

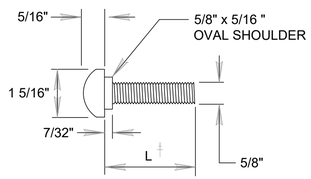


TYPE A PLAIN WASHER

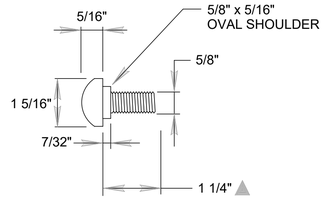
NOTE:
FOR ALL SPLICE BOLT CONNECTIONS, PROVIDE A TYPE A PLAIN WASHER BETWEEN BOLT HEAD AND TERMINAL SECTION.



NUT



POST BOLT

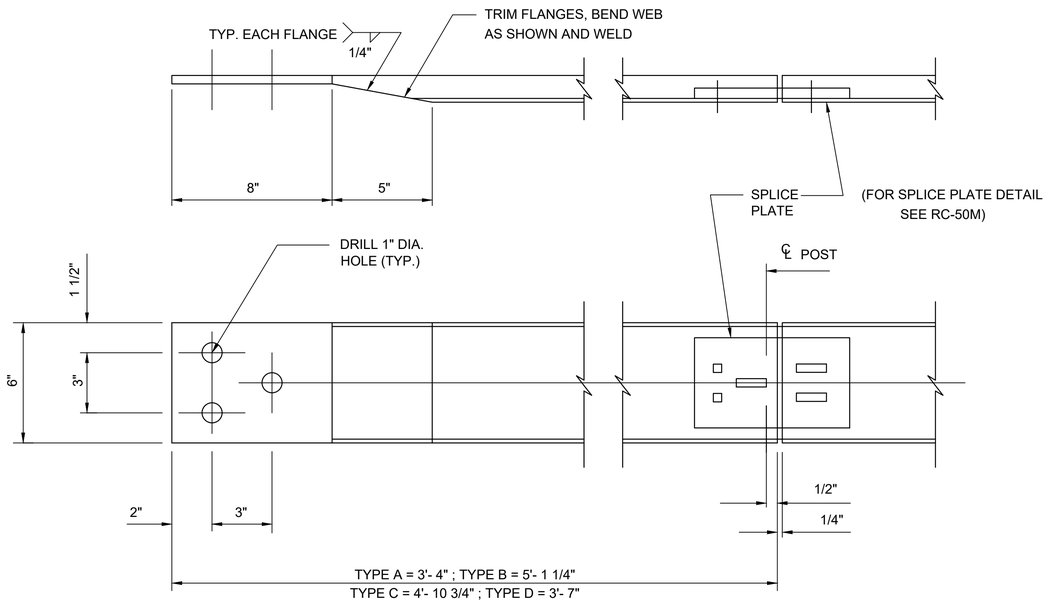


SPLICE BOLT

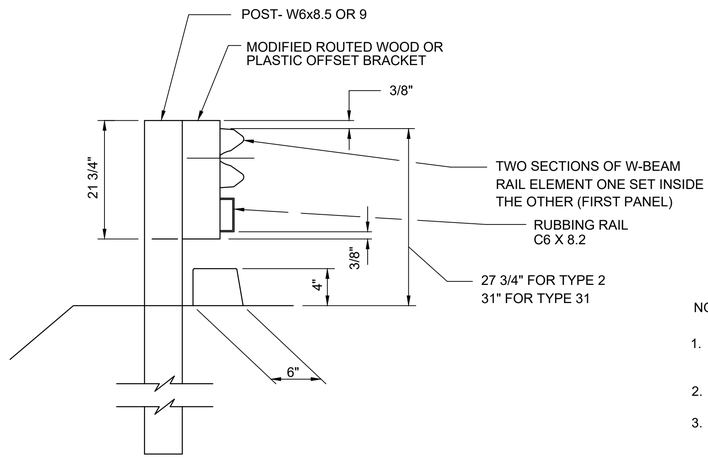
‡ USE L = 4 1/2" FOR ALL RUBBING RAIL TO GUIDE RAIL POST CONNECTIONS AND USE L = 10" FOR ALL W-BEAM RAIL ELEMENT TO GUIDE RAIL POST AND ROUTED OFFSET BRACKET CONNECTIONS.

▲ FOR FOUR (4) PANEL NESTED RAIL ELEMENT USE 2 1/8" SPLICE BOLT.

TYPE 2 GUIDE RAIL
BOLTS, NUTS, AND WASHERS



C6X8.2 RUBBING RAIL END DETAIL



SECTION VIEW

GUIDE RAIL WITH RUB RAIL

NOTES:

1. ATTACH W-BEAM RAIL ELEMENTS TO EACH POST. SPLICE RAIL ELEMENTS ONLY AT POSTS AND LAP IN THE DIRECTION OF TRAFFIC.
2. USE SPLICE BOLTS TO DEVELOP THE DESIGN STRENGTH OF THE RAIL ELEMENT.
3. USE SLOTTED ROUND-HEADED BOLTS TO PROVIDE FOR WRENCH OR SCREWDRIVER.
4. TRANSITION THE HEIGHT OF GUIDE RAIL WHEN CONNECTING TYPE 2 TO TYPE 31 GUIDE RAIL USING A 25'-0" LENGTH OF VERTICAL TRANSITION AS PER RC-51M. PAYMENT FOR THE 25'-0" HEIGHT TRANSITION IN GUIDE RAIL IS PAID AS TYPE 31 GUIDE RAIL.

PENNA TURN-PIKE

RECOMMENDED: JUNE 14, 2018
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JUNE 18, 2018
CHIEF ENGINEER

STRONG POST GUIDE RAIL INSTALLATION (VARIOUS DETAILS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

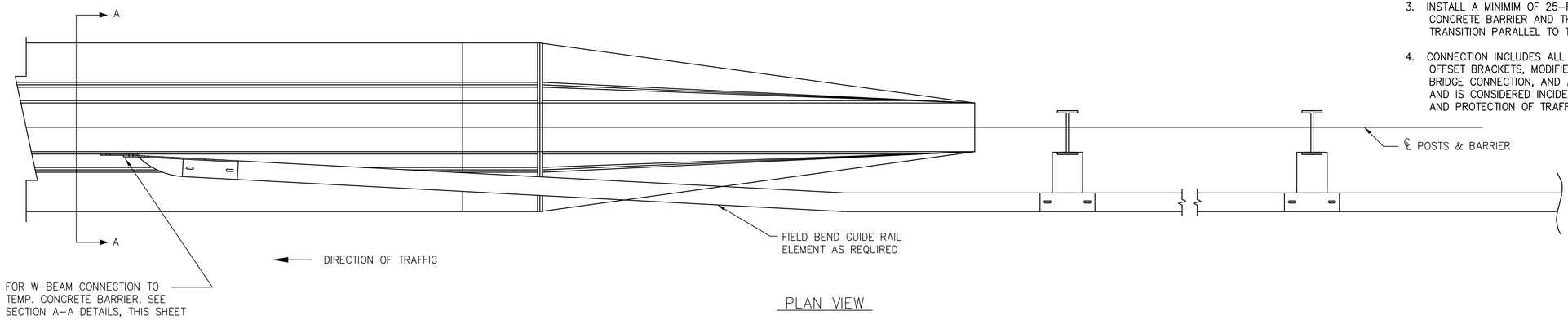
FILE NAME: PTS-130-5.DWG
DRAWING TYPE: 5A
SHEET 5 OF 5

DATE: JANUARY 2019

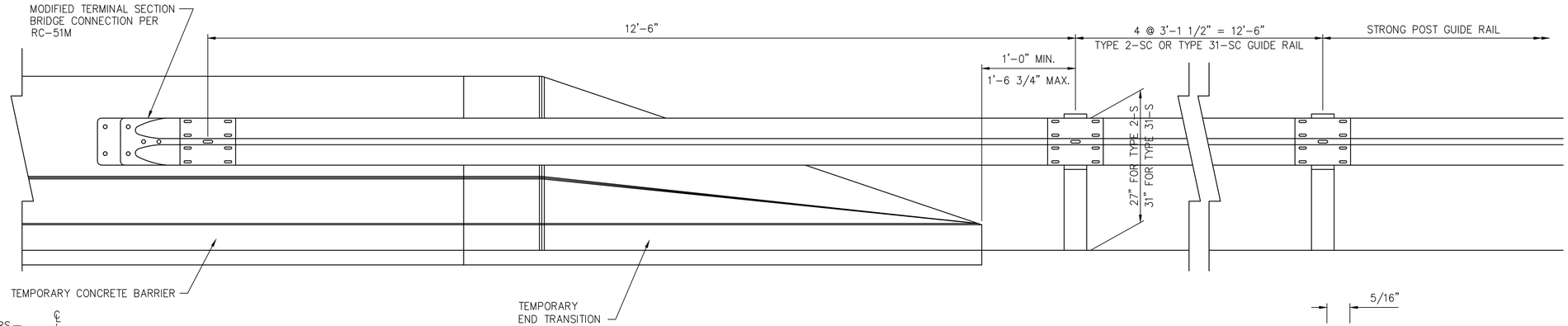
PTS-130

NOTES:

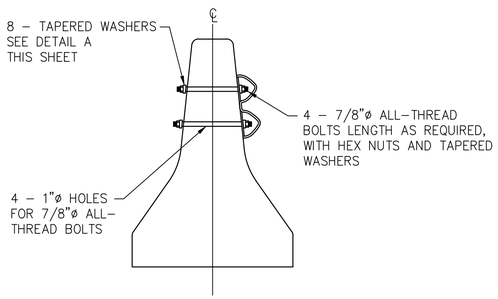
1. CONSTRUCT IN ACCORDANCE WITH SECTION 620 AND PTS–130 WHERE APPLICABLE.
2. PROVIDE STRUCTURAL STEEL OR MALLEABLE IRON TAPERED WASHERS GALVANIZED IN ACCORDANCE WITH SECTION 1105.02(S).
3. INSTALL A MINIMIM OF 25–FEET OF TEMPORARY CONCRETE BARRIER AND THE TEMPORARY END TRANSITION PARALLEL TO THE GUIDE RAIL.
4. CONNECTION INCLUDES ALL POSTS, RAIL ELEMENTS, OFFSET BRACKETS, MODIFIED TERMINAL SECTION BRIDGE CONNECTION, AND ASSOCIATED HARDWARE AND IS CONSIDERED INCIDENTAL TO THE MAINTENANCE AND PROTECTION OF TRAFFIC.



PLAN VIEW

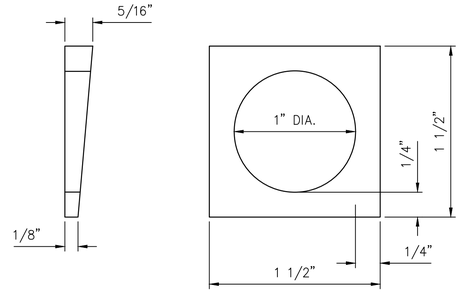


ELEVATION VIEW



SECTION A–A

TEMPORARY CONNECTION OF STRONG POST GUIDE RAIL TO TEMPORARY CONCRETE BARRIER



DETAIL A
TAPERED WASHERS

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

TEMPORARY GUIDE RAIL CONNECTIONS (STRONG POST GUIDE RAIL TO TEMPORARY CONCRETE BARRIER)

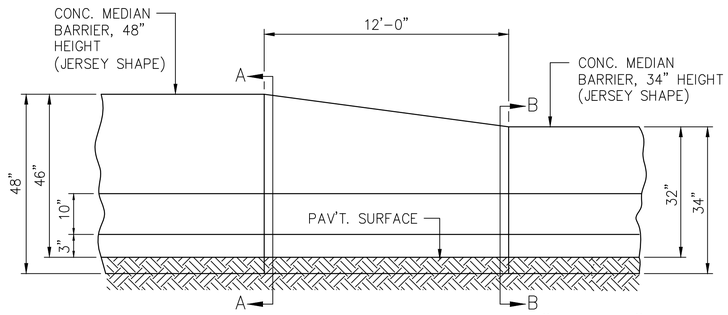
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-135-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

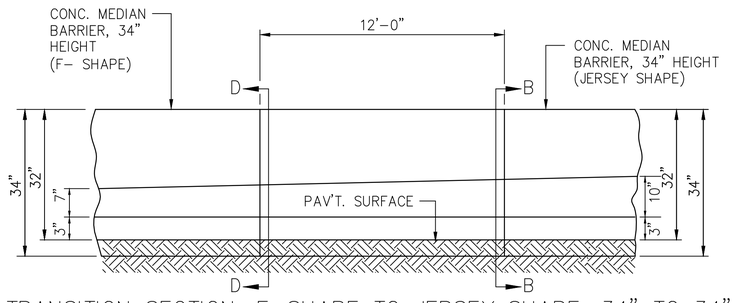
DATE: JANUARY 2019

PTS-135

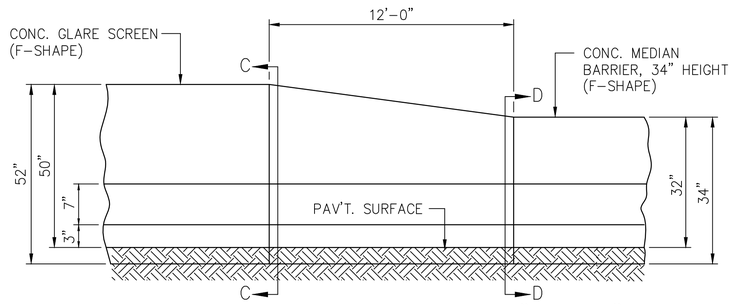
FOR NOTES SEE SHEET 2 OF 3.
FOR SECTIONS SEE SHEET 2 OF 3.



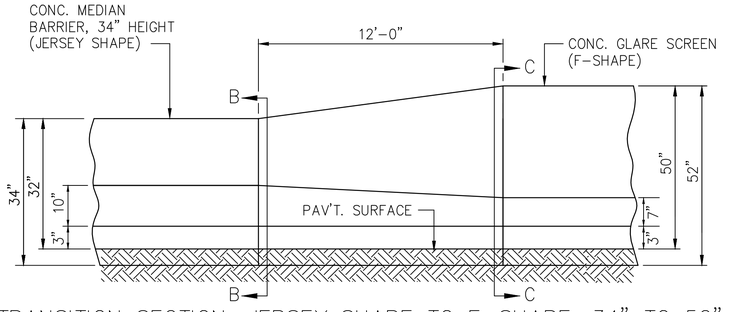
TRANSITION SECTION, JERSEY SHAPE, 48" TO 34"



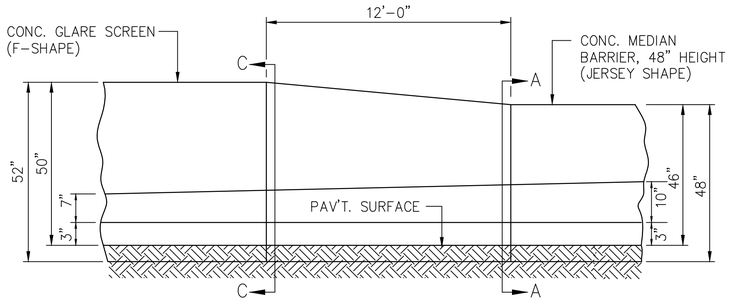
TRANSITION SECTION, F-SHAPE TO JERSEY SHAPE, 34" TO 34"



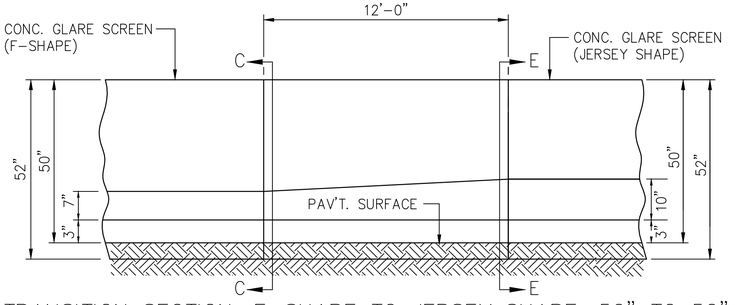
TRANSITION SECTION, F-SHAPE, 52" TO 34"



TRANSITION SECTION, JERSEY SHAPE TO F-SHAPE, 34" TO 52"



TRANSITION SECTION, F-SHAPE TO JERSEY SHAPE, 52" TO 48"



TRANSITION SECTION, F-SHAPE TO JERSEY SHAPE, 52" TO 52"

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

CONCRETE MEDIAN BARRIER & CONCRETE GLARE SCREEN (TRANSITION SECTIONS)

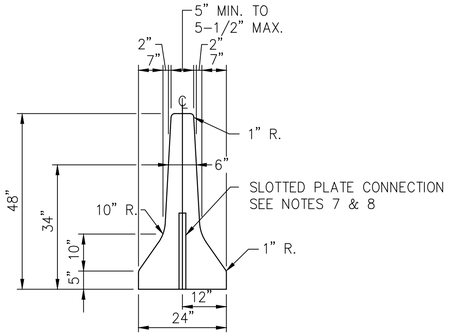
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-140-1.dwg
DRAWING TYPE: 5A

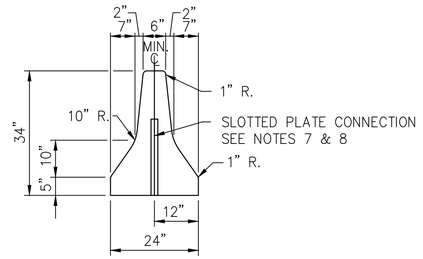
SHEET 1 OF 3

DATE: JANUARY 2019

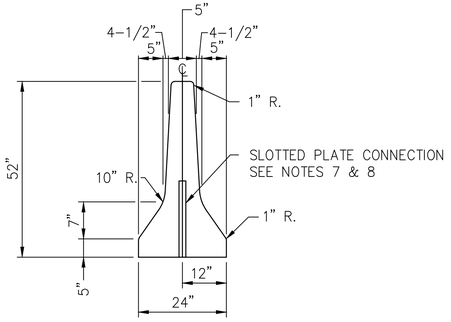
PTS-140



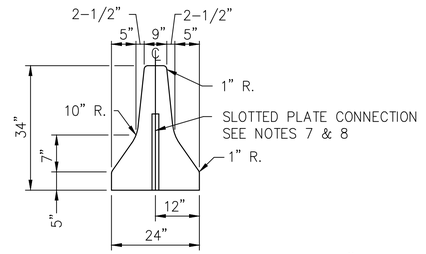
SECTION A–A, CONCRETE MEDIAN BARRIER, 48" HEIGHT
(JERSEY SHAPE)



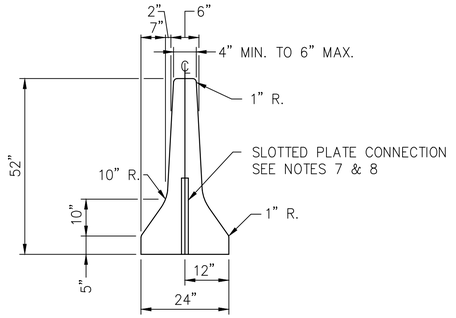
SECTION B–B, CONCRETE MEDIAN BARRIER, 34" HEIGHT
(JERSEY SHAPE)



SECTION C–C, CONCRETE GLARE SCREEN, 52" HEIGHT
(F–SHAPE)



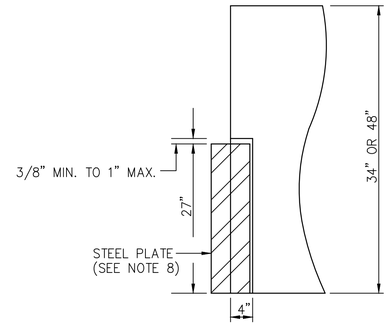
SECTION D–D, CONCRETE MEDIAN BARRIER, 34" HEIGHT
(F–SHAPE)

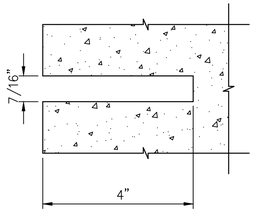


SECTION E–E, CONCRETE GLARE SCREEN, 52" HEIGHT
(JERSEY SHAPE)

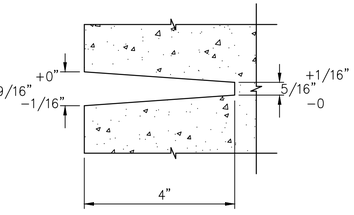
NOTES:

1. PROVIDE TRANSITION SECTIONS MEETING THE REQUIREMENTS OF SECTION 623 AND SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
2. PROVIDE REINFORCEMENT FOR TRANSITION SECTIONS AS SHOWN ON RC–57M AND RC–59M.
3. PROVIDE CONCRETE TRANSITION SECTIONS WITH 2 – 1 1/4" DIAMETER LIFTING HOLES LOCATED 16" FROM THE TOP OF THE BARRIER SECTION.
4. CONNECT CONCRETE MEDIAN BARRIER TO MEDIAN GUIDE RAIL AS SHOWN ON SHEET 3 OF 3.
   A. WHEN CONNECTING MEDIAN GUIDE RAIL TO CONCRETE MEDIAN BARRIER, 48" HEIGHT, INSTALL A TRANSITION SECTION, JERSEY SHAPE, AS SHOWN ON THIS SHEET.
   B. WHEN CONNECTING MEDIAN GUIDE RAIL TO CONCRETE GLARE SCREEN, INSTALL A TRANSITION SECTION, F–SHAPE, AS SHOWN ON THIS SHEET.
5. WHEN CONNECTING CONCRETE GLARE SCREEN TO CONCRETE MEDIAN BARRIER, 34 HEIGHT (JERSEY SHAPE) INSTALL A TRANSITION SECTION, F–SHAPE TO JERSEY SHAPE AND A TRANSITION SECTION, JERSEY SHAPE AS SHOWN ON THIS SHEET.
6. IF REINFORCEMENT STEEL IS USED, PROVIDE, A MINIMUM OF 4 REINFORCEMENT CHAIRS PER BARRIER SECTION.
7. PROVIDE SLOTTED PLATE CONNECTIONS BETWEEN BARRIER SECTIONS AS SHOWN ON THIS SHEET FOR SECTION A–A, SECTION B–B AND SECTION E–E AND AS SHOWN ON RC–57M FOR SECTION C–C AND SECTION D–D.
8. PROVIDE PLATES (5/16" X 7" X 27") FOR SECTION A–A, SECTION B–B AND SECTION E–E (1/2" X 12" X 27") FOR SECTION C–C AND SECTION D–D MEETING THE REQUIREMENTS OF SECTION 1105. GALVANIZE PLATES IN ACCORDANCE WITH SECTION 1105.





SLOT DETAIL



PERMISSIBLE TAPER

SLOTTED PLATE CONNECTION
(JERSEY SHAPE BARRIER)

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

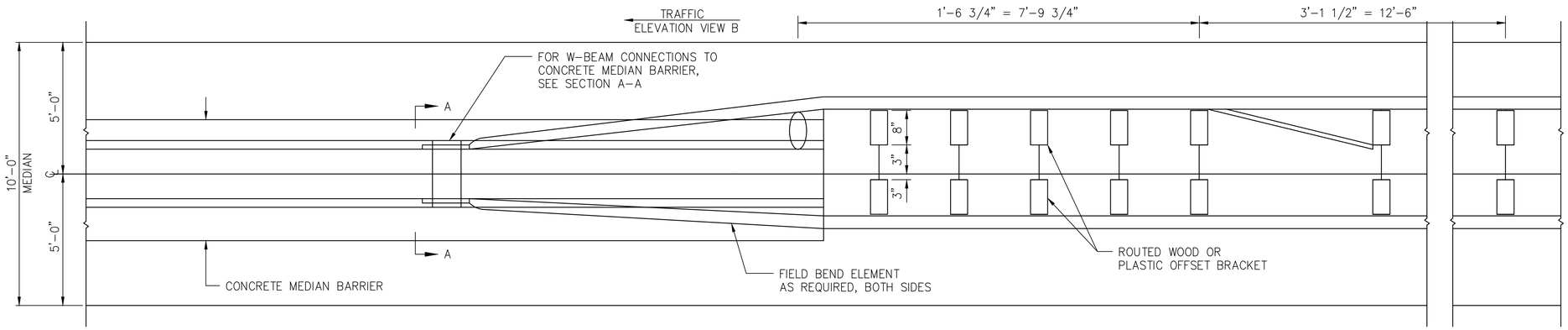
CONCRETE MEDIAN BARRIER & CONCRETE GLARE SCREEN (TRANSITION SECTIONS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

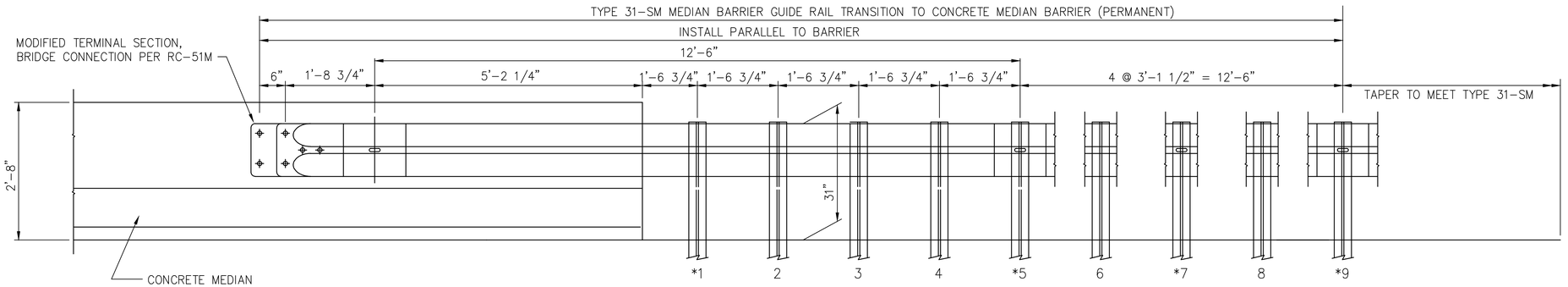
FILE NAME: PTS-140-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 3

DATE: JANUARY 2019

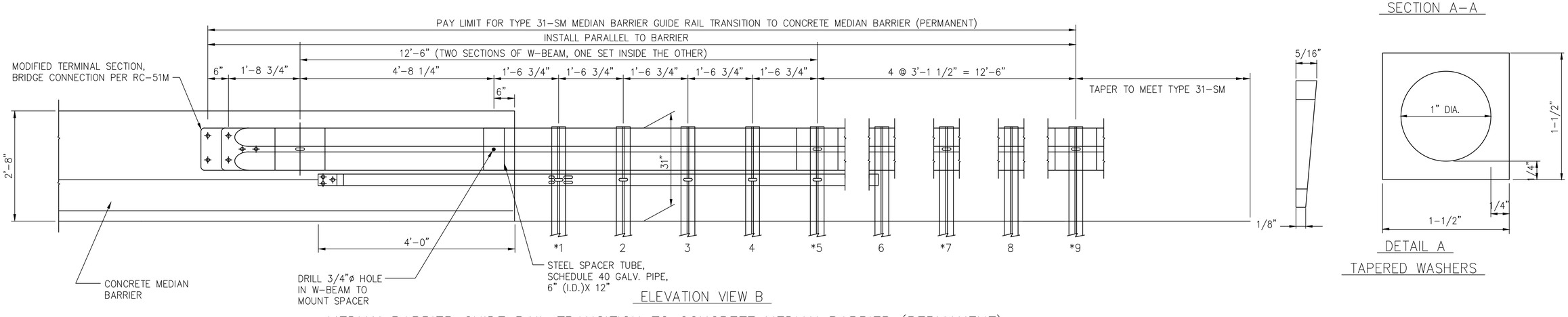
PTS-140



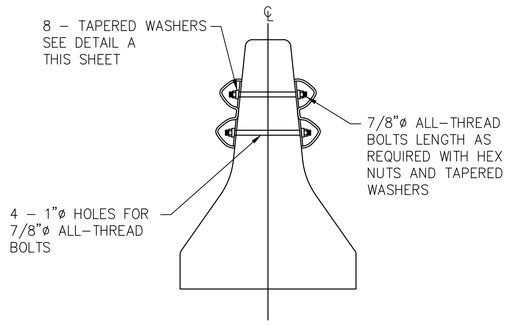
PLAN VIEW



ELEVATION VIEW A



ELEVATION VIEW B



SECTION A-A

DETAIL A

TAPERED WASHERS

NOTES:

1. PROVIDE MATERIALS AS PER RC-51M AND IN ACCORDANCE WITH SECTION 620. USE W6x8.5 OR 9 POSTS.
2. GALVANIZE ALL HARDWARE, GUIDE RAIL MATERIAL AND POSTS IN ACCORDANCE WITH SECTION 1109.
3. ATTACH MODIFIED TERMINAL SECTION, BRIDGE CONNECTIONS AND RUB RAIL FLUSH WITH FACE OF CONCRETE MEDIAN BARRIER.
4. PROVIDE #1, #2, & #3 POSTS 8'-0" LONG AND EMBED THEM 2'-10" DEEPER THAN THE OTHER POSTS.
5. W-BEAM AND RUB RAIL ARE BOLTED TO THE POSTS THAT ARE DENOTED THUS (*). BOLT RUB RAIL TO POSTS WITHOUT USING WASHERS.
6. PROVIDE RUB RAIL AS PER RC-50M AND SHOWN ON PTS-130 FOR A TYPE B APPROACH END TRANSITION.
7. PROVIDE STRUCTURAL STEEL OR MALLEABLE IRON TAPERED WASHERS GALVANIZED IN ACCORDANCE WITH SECTION 1105.02(s).

MEDIAN BARRIER GUIDE RAIL TRANSITION TO CONCRETE MEDIAN BARRIER (PERMANENT)

PENNA TURN-PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

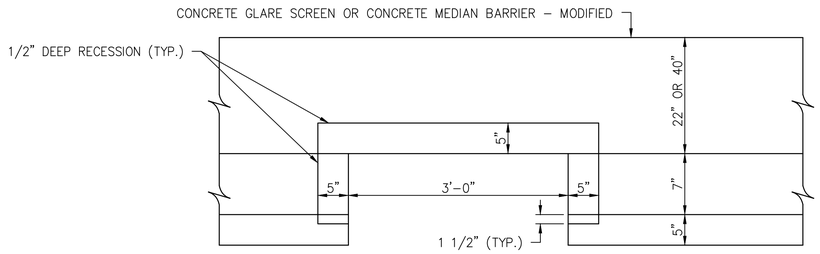
CONCRETE MEDIAN BARRIER & CONCRETE GLARE SCREEN (TRANSITION TO MEDIAN GUIDE RAIL)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

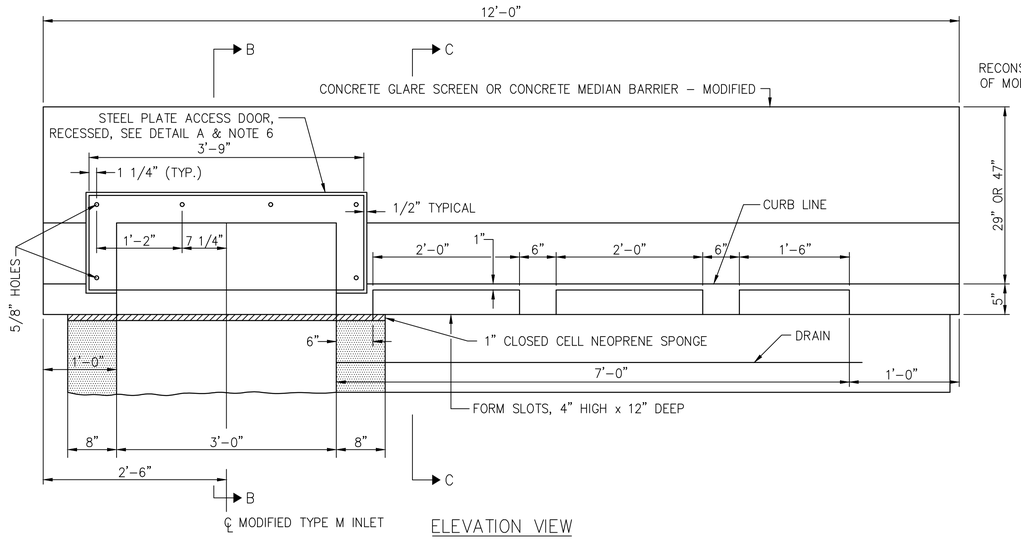
FILE NAME: PTS-140-3.dwg
DRAWING TYPE: 5A
SHEET 3 OF 3

DATE: JANUARY 2019

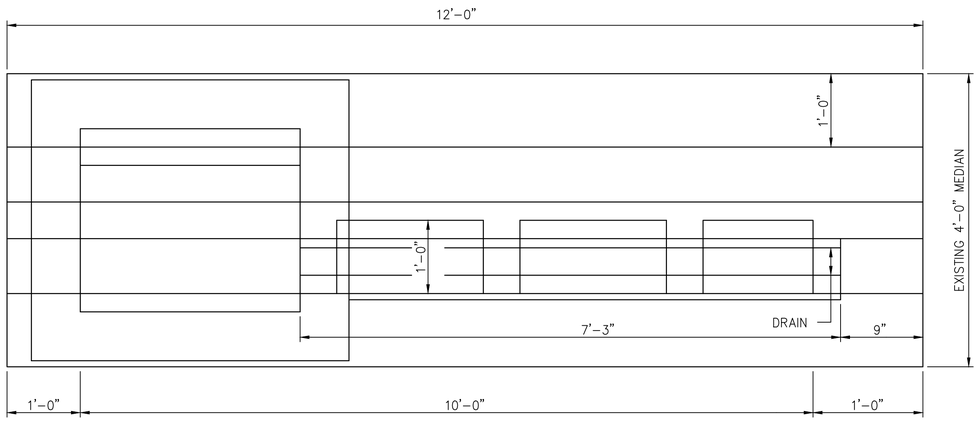
PTS-140



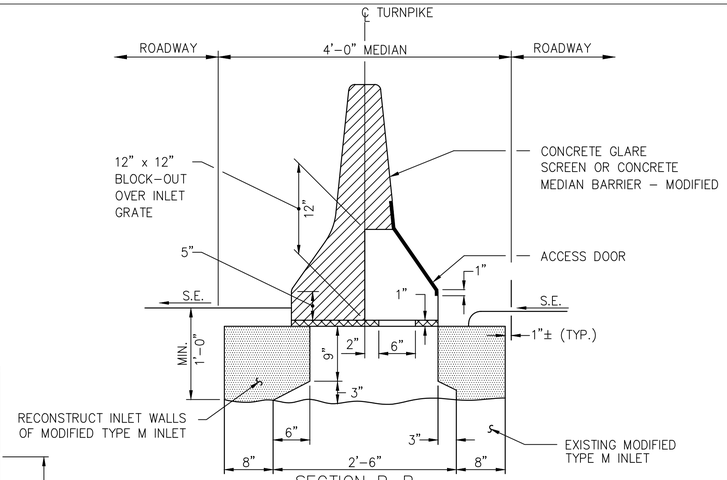
BARRIER RECESS DETAIL
FOR ACCESS DOOR



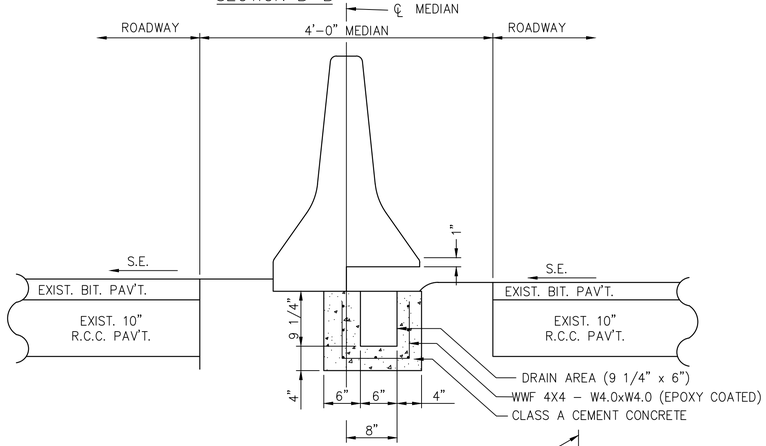
ELEVATION VIEW



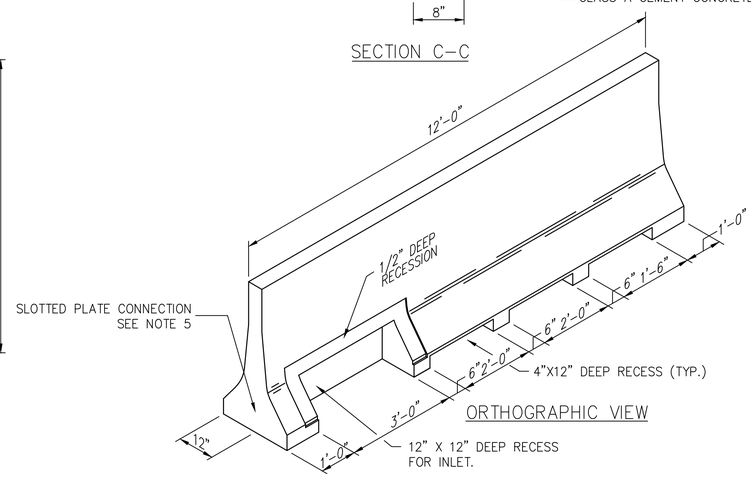
PLAN VIEW
CONCRETE GLARE SCREEN OR CONCRETE MEDIAN BARRIER – MODIFIED



SECTION B–B



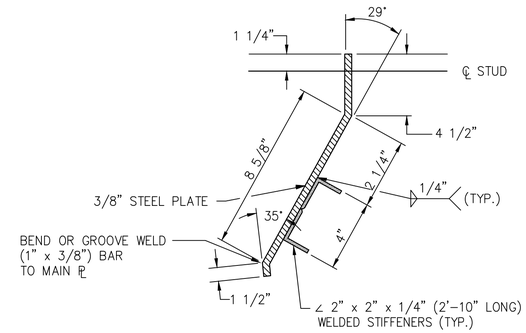
SECTION C–C



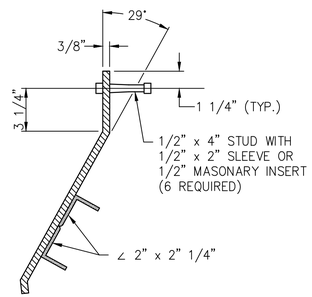
ORTHOGRAPHIC VIEW

NOTES:

1. PROVIDE CONCRETE GLARE SCREEN OR CONCRETE MEDIAN BARRIER MEETING THE REQUIREMENTS OF SECTION 622, 623 AND 714, AND SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
2. PROVIDE REINFORCEMENT AS SHOWN ON RC–57M FOR MEDIAN BARRIER OR RC–59M FOR GLARE SCREEN.
3. PROVIDE CONCRETE MEDIAN BARRIER & GLARE SCREEN SECTIONS WITH 2 – 1 1/4" LIFTING HOLES LOCATED 16" FROM THE TOP OF THE BARRIER SECTION.
4. MANUFACTURE BARRIER WITH A MAXIMUM HEIGHT TOLERANCE OF 1/4".
5. PROVIDE SLOTTED PLATE CONNECTIONS BETWEEN BARRIER SECTIONS AS SHOWN ON RC–57M.
6. AFTER FABRICATION IS COMPLETE, GALVANIZE STEEL PLATE IN ACCORDANCE WITH SECTION 1105.02(S).
7. SEE DETAIL B FOR METHOD OF ATTACHING ACCESS DOOR TO CONCRETE GLARE SCREEN OR CONCRETE MEDIAN BARRIER – MODIFIED. USE 1/2" STAINLESS STEEL BOLTS THREADED INTO SLEEVE OR MASONRY INSERTS.
8. SEE RC–57M AND RC–59M FOR TYPICAL CONCRETE MEDIAN BARRIER AND CONCRETE GLARE SCREEN SECTIONS.



DETAIL A
SECTIONAL VIEW OF ACCESS DOOR



DETAIL B
ATTACHMENT METHOD

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

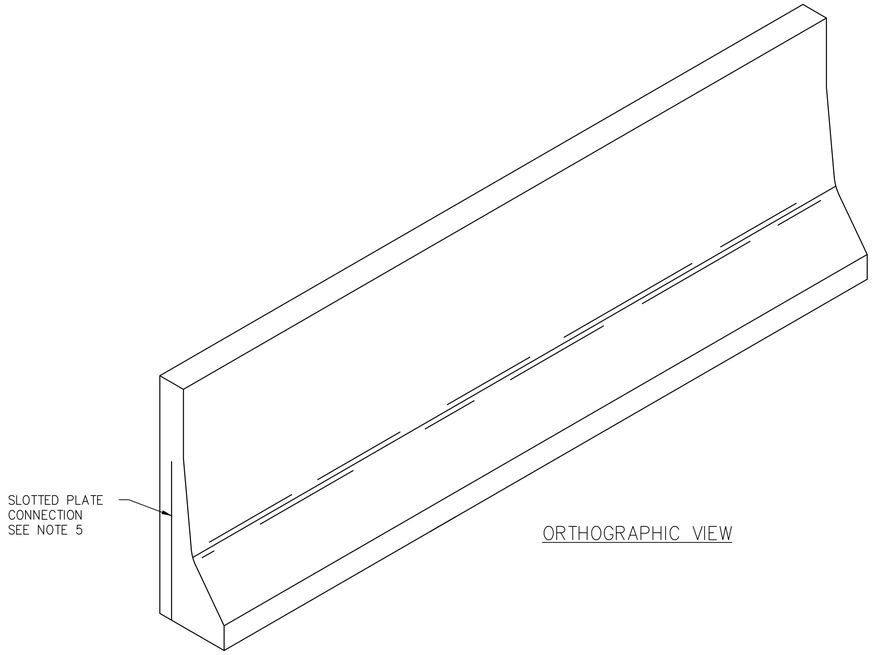
CONCRETE GLARE SCREEN AND CONCRETE MEDIAN BARRIER - MODIFIED OVER MODIFIED TYPE M INLET

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-141.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-141

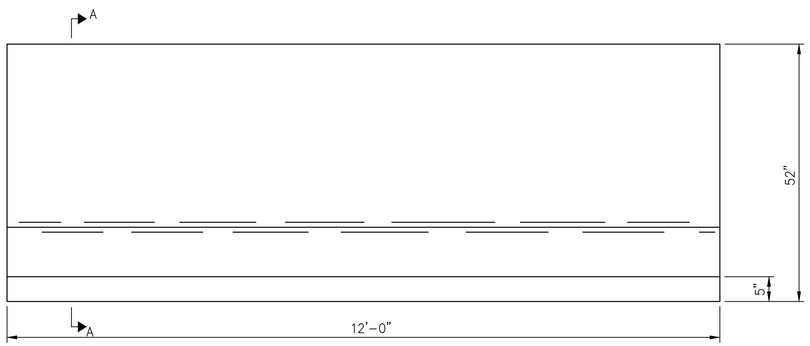


ORTHOGRAPHIC VIEW

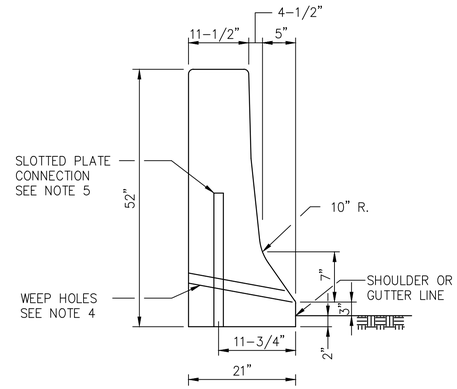
NOTES:

1. PROVIDE SINGLE FACE CONCRETE BARRIER MEETING THE REQUIREMENTS OF SECTION 623 AND SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
2. PROVIDE REINFORCEMENT FOR 52" SINGLE FACE CONCRETE BARRIER AS SHOWN ON SHEET 3 OF 4.
3. PROVIDE SINGLE FACE CONCRETE BARRIER SECTIONS WITH 2–1 1/4" LIFTING HOLES LOCATED 16" FROM THE TOP OF THE BARRIER SECTION.
4. PROVIDE SINGLE FACE CONCRETE BARRIER SECTIONS WITH TWO EQUALLY SPACED 2 INCH DIAMETER WEEP HOLES WHICH OUTLET 5 INCHES FROM THE BASE OF THE BARRIER. GROUT WEEP HOLES IN SINGLE FACE CONCRETE BARRIER INSTALLED ADJACENT TO BRIDGE ABUTMENTS OR OVER PAVEMENT BASE DRAIN.
5. PROVIDE SLOTTED PLATE CONNECTIONS BETWEEN BARRIER SECTIONS AS SHOWN ON RC–58M. REINFORCE SLOT AS SHOWN ON RC–58M.
6. PROVIDE PLATES (1/2" X 12" X 27") MEETING THE REQUIREMENTS OF SECTION 1105. GALVANIZE PLATES AS SPECIFIED IN SECTION 1105.
7. ROUND OR CHAMFER HORIZONTAL EDGES WITH A RADIUS OF 1" EXCEPT AS SHOWN.

PLAN VIEW



ELEVATION VIEW
TYPICAL BARRIER SECTION



SECTION A–A, 52" BARRIER
(F SHAPE)

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

SINGLE FACE CONCRETE BARRIER (52" BARRIER DETAILS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-142-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 5

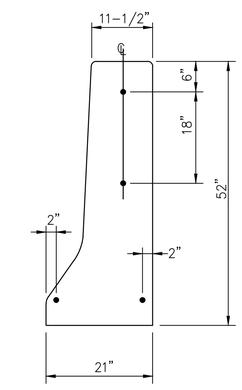
DATE: JANUARY 2019

PTS-142

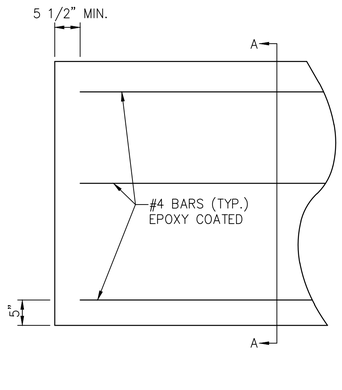
NOTES:

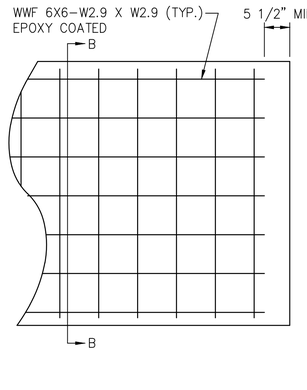
1. PROVIDE REINFORCEMENT MEETING THE REQUIREMENTS OF SECTION 709, WITH A MINIMUM CONCRETE COVER OF 1 1/2–INCHES OR AS SHOWN HERE.

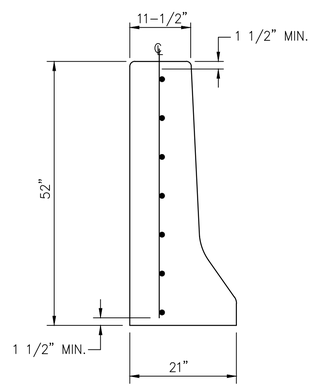
2. IF REINFORCEMENT STEEL IS USED, PROVIDE A MINIMUM OF 4 REINFORCEMENT CHAIRS PER BARRIER SECTION.



SECTION A–A
REINFORCEMENT STEEL







SECTION B–B
WELDED WIRE FABRIC

TYPICAL REINFORCEMENT DETAILS FOR 52" BARRIER

SEE RC–58M FOR LOCATION OF SLOTTED PLATE CONNECTIONS & STIRRUPS

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

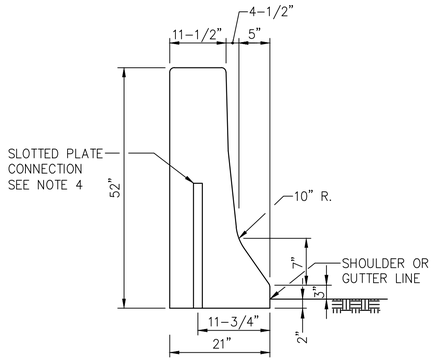
SINGLE FACE CONCRETE BARRIER (52" BARRIER DETAILS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

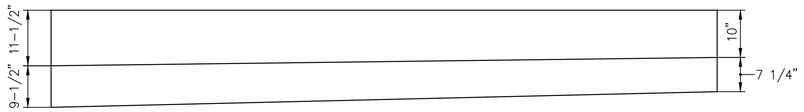
FILE NAME: PTS-142-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 5

DATE: JANUARY 2019

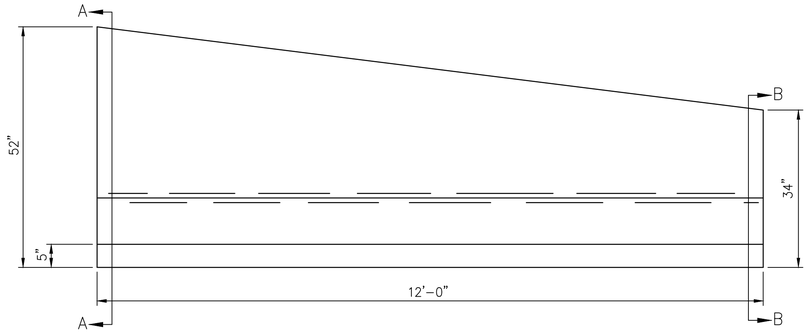
PTS-142



SECTION A–A, 52" BARRIER

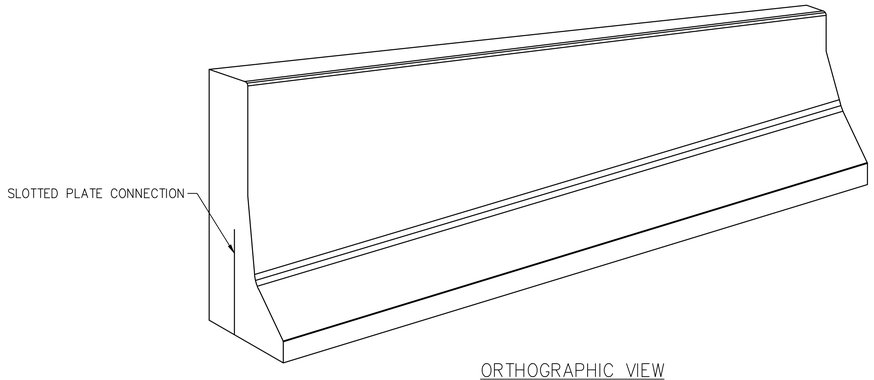


PLAN VIEW



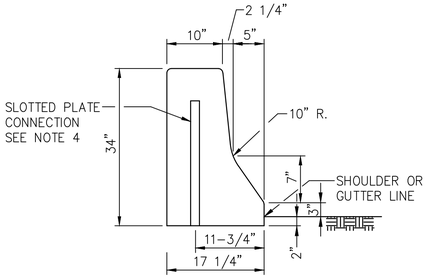
ELEVATION VIEW

RIGHT TRANSITION SECTION

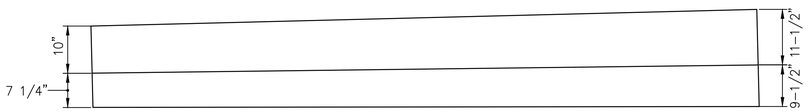


ORTHOGRAPHIC VIEW

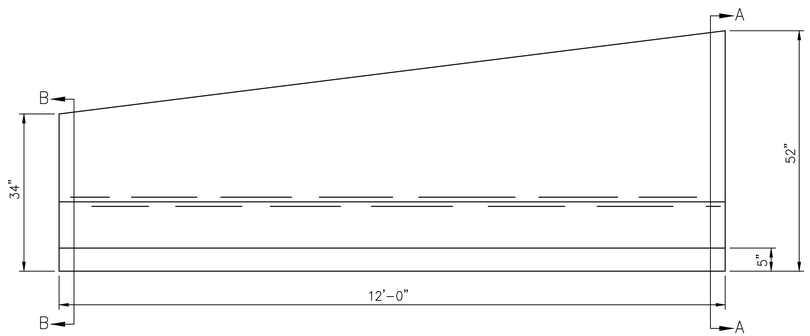
RIGHT TRANSITION SECTION



SECTION B–B, 34" BARRIER

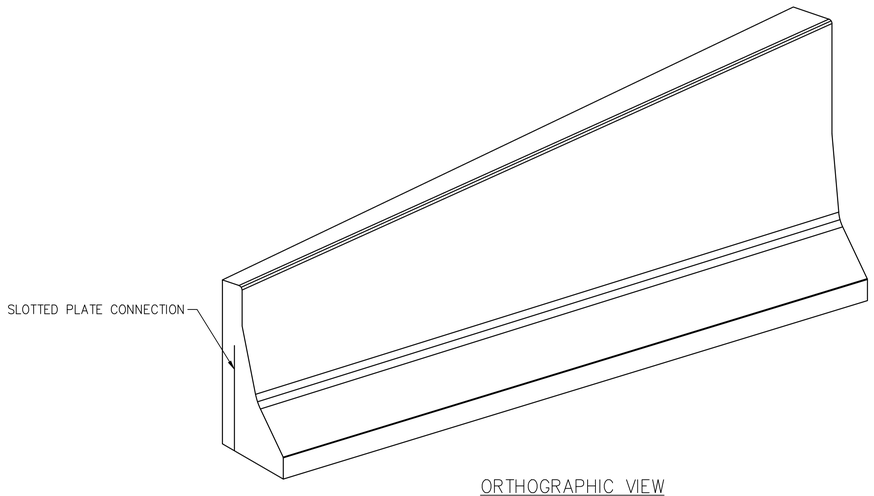


PLAN VIEW



ELEVATION VIEW

LEFT TRANSITION SECTION



ORTHOGRAPHIC VIEW

LEFT TRANSITION SECTION

NOTES:

1. PROVIDE SINGLE FACE CONCRETE BARRIER MEETING THE REQUIREMENTS OF SECTION 623 AND SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
2. PROVIDE REINFORCEMENT FOR 52" SINGLE FACE CONCRETE BARRIER AS SHOWN ON SHEET 2 OF 5.
3. PROVIDE TRANSITION SECTIONS WITH 2–1 1/4" LIFTING HOLES LOCATED 16" FROM THE TOP OF THE BARRIER SECTION.
4. PROVIDE SLOTTED PLATE CONNECTIONS BETWEEN TRANSITION SECTIONS AS SHOWN ON RC–58M. REINFORCE SLOT AS SHOWN ON RC–58M.
5. PROVIDE SLOTTED PLATE CONNECTIONS BETWEEN TRANSITION SECTIONS AND 34" OR 41" SINGLE FACE BARRIER (F–SHAPE) OR END TRANSITIONS AS SHOWN ON RC–58M WITH A MAXIMUM TOLERANCE OF 1/8 INCH FROM THE PROPOSED LOCATION. REINFORCE SLOT AS SHOWN ON RC–58M.
6. PROVIDE PLATES (1/2" X 12" X 27") MEETING THE REQUIREMENTS OF SECTION 1105. GALVANIZE AS SPECIFIED IN SECTION 1105.
7. PROVIDE END TRANSITIONS AS SHOWN ON RC–58M.
8. ROUND OR CHAMFER HORIZONTAL EDGES WITH A RADIUS OF 1" EXCEPT AS SHOWN.

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 5, 2015

CHIEF ENGINEER

SINGLE FACE CONCRETE BARRIER (TRANSITION SECTIONS 52" TO 34")

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-142-3.dwg

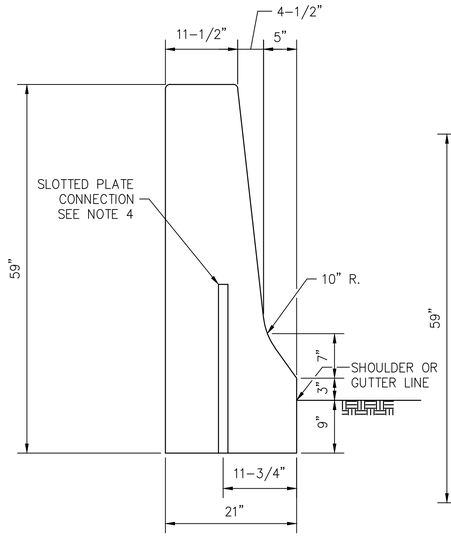
DRAWING TYPE: 5A

SHEET 3 OF 5

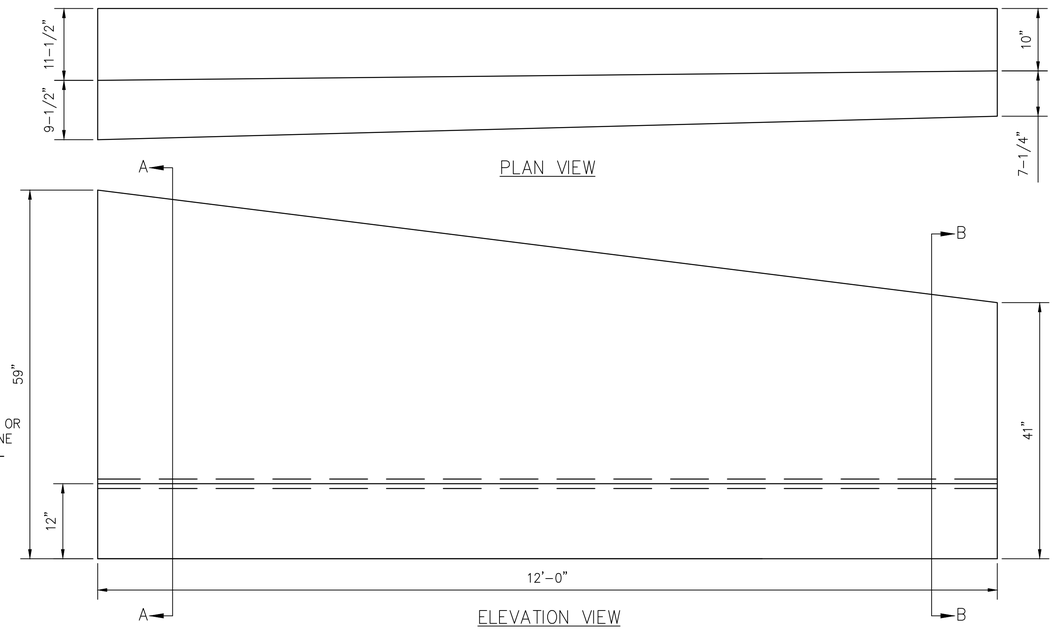
DATE: JANUARY 2019

PTS-142

FOR NOTES SEE SHEET 3 OF 5.



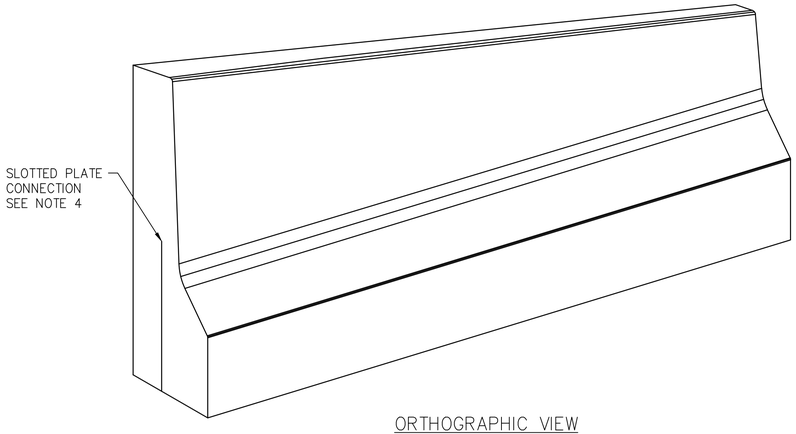
SECTION A-A, 59" BARRIER



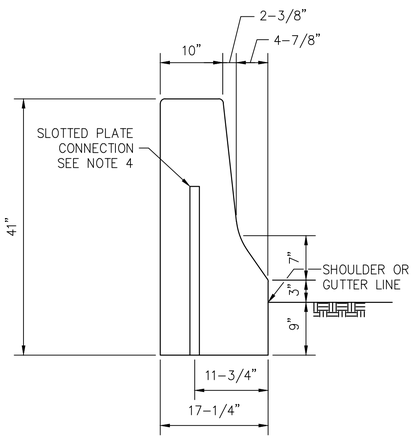
PLAN VIEW

ELEVATION VIEW

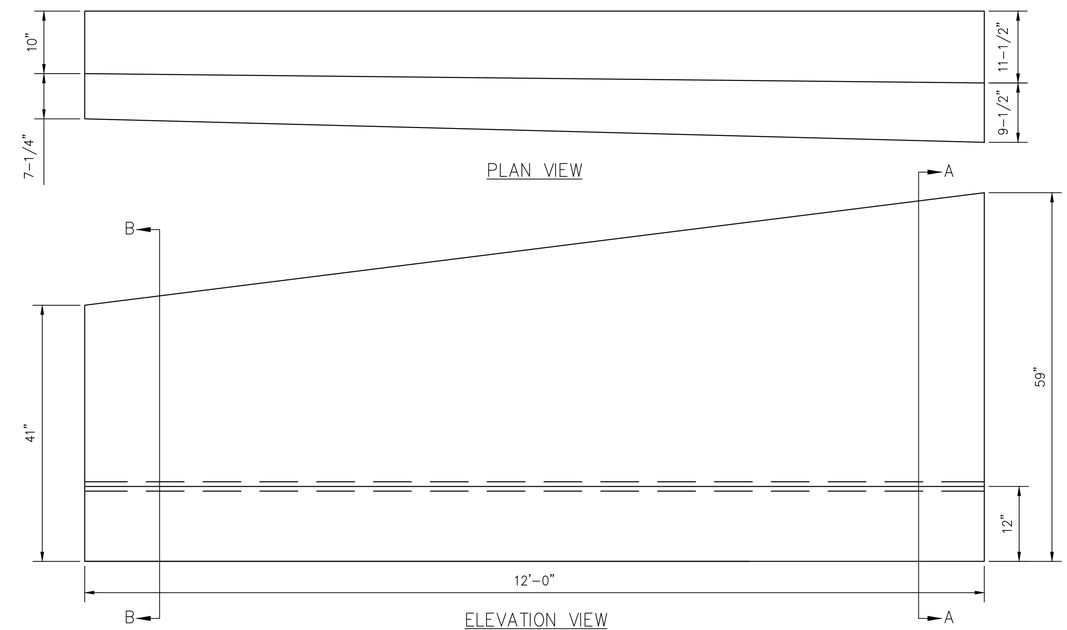
RIGHT TRANSITION SECTION



ORTHOGRAPHIC VIEW



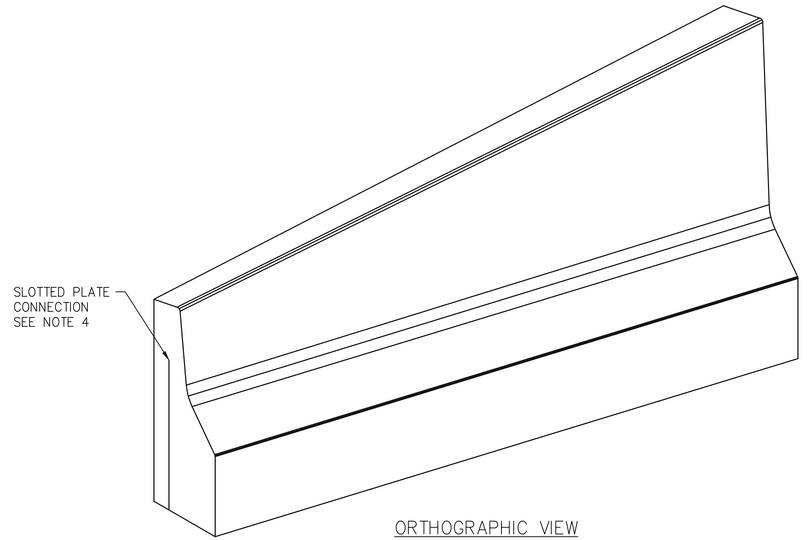
SECTION B-B, 41" BARRIER



PLAN VIEW

ELEVATION VIEW

LEFT TRANSITION SECTION



ORTHOGRAPHIC VIEW

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 5, 2015

CHIEF ENGINEER

SINGLE FACE CONCRETE BARRIER (TRANSITION SECTIONS 59" TO 41")

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

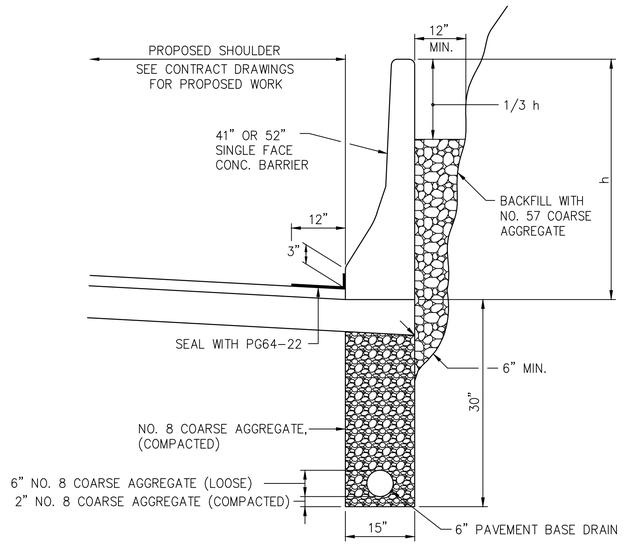
FILE NAME: PTS-142-4.dwg

DRAWING TYPE: 5A

SHEET 4 OF 5

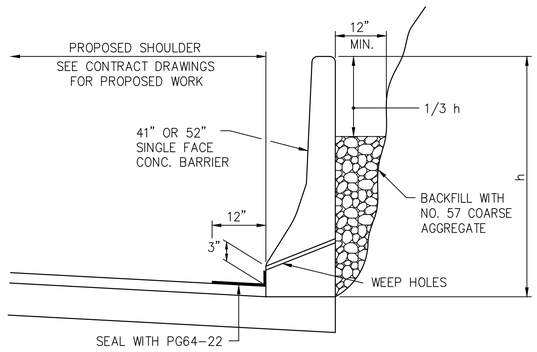
DATE: JANUARY 2019

PTS-142



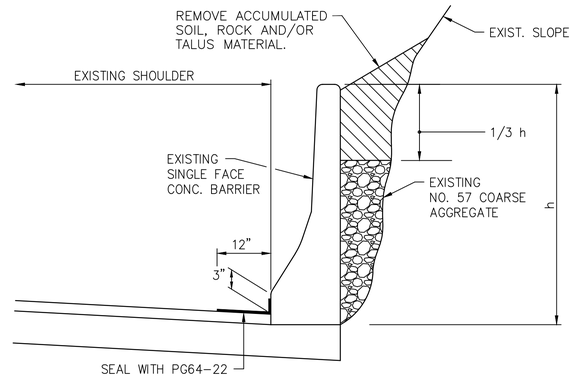
SINGLE FACE CONCRETE BARRIER
WITH 6" PAVEMENT BASE DRAIN

(SEE NOTE 1)



SINGLE FACE CONCRETE BARRIER
ON CUT SLOPE

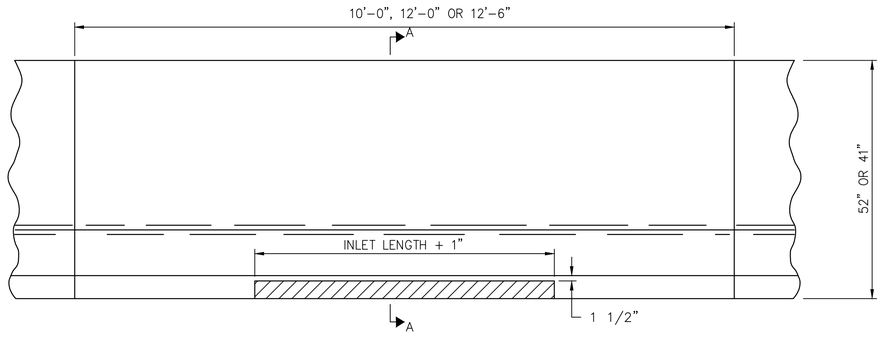
(SEE NOTE 1)



CLEANING BEHIND EXISTING
SINGLE FACE CONCRETE BARRIER
ON CUT SLOPE

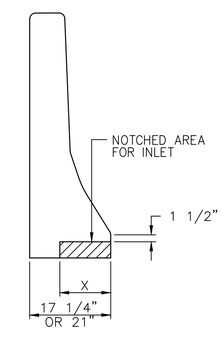
NOTES:

1. IF INDICATED IN THE CONTRACT DRAWINGS EXCAVATE THE EXISTING SLOPE (2:1 OR FLATTER IN SOILS, 1 1/4:1 OR FLATTER IN ROCK) TO ACCOMODATE THE INSTALLATION OF THE BARRIER.



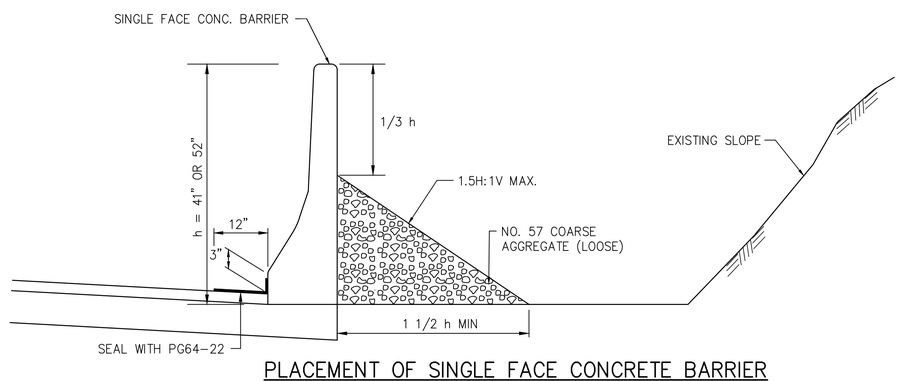
ELEVATION VIEW

SINGLE FACE CONCRETE BARRIER
OVER EXISTING INLET



SECTION A-A

X = WIDTH OF INLET WALL



PLACEMENT OF SINGLE FACE CONCRETE BARRIER
IN FRONT OF EXISTING SLOPE

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 5, 2015

CHIEF ENGINEER

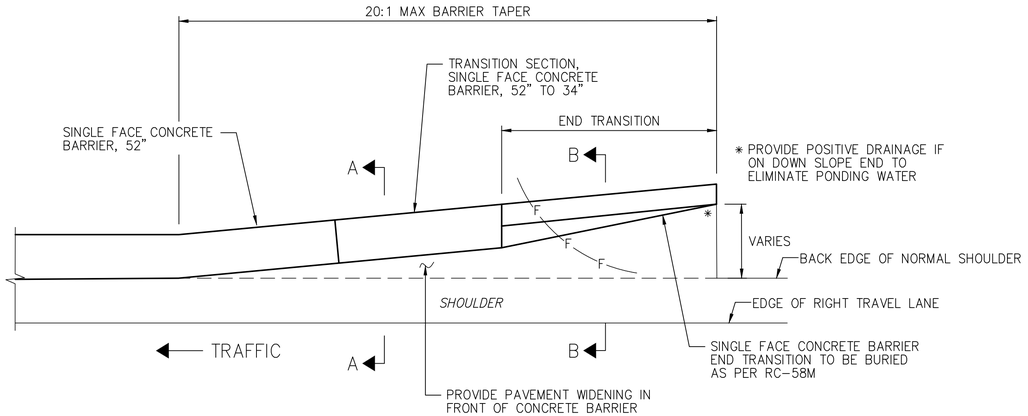
SINGLE FACE CONCRETE BARRIER (INSTALLATION DETAILS)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

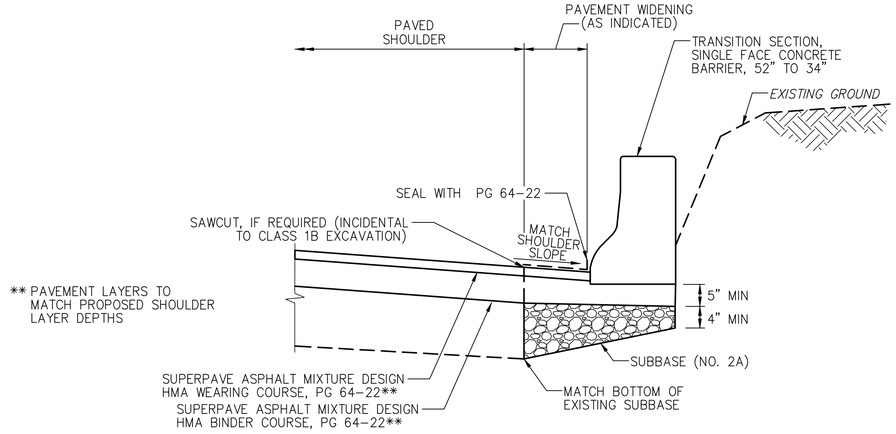
FILE NAME: PTS-142-5.dwg
DRAWING TYPE: 5A
SHEET 5 OF 5

DATE: JANUARY 2019

PTS-142

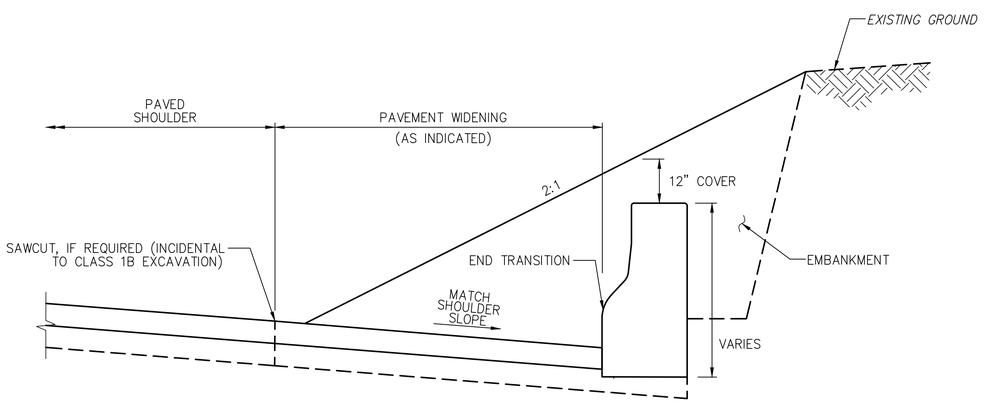


PLAN VIEW



SECTION A-A

NOTE:
PAVE WEARING COURSE WITH SHOULDER WHEN RESURFACING OR RECONSTRUCTING SHOULDER.



SECTION B-B

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

SINGLE FACE CONCRETE BARRIER BURIED IN CUT SLOPE

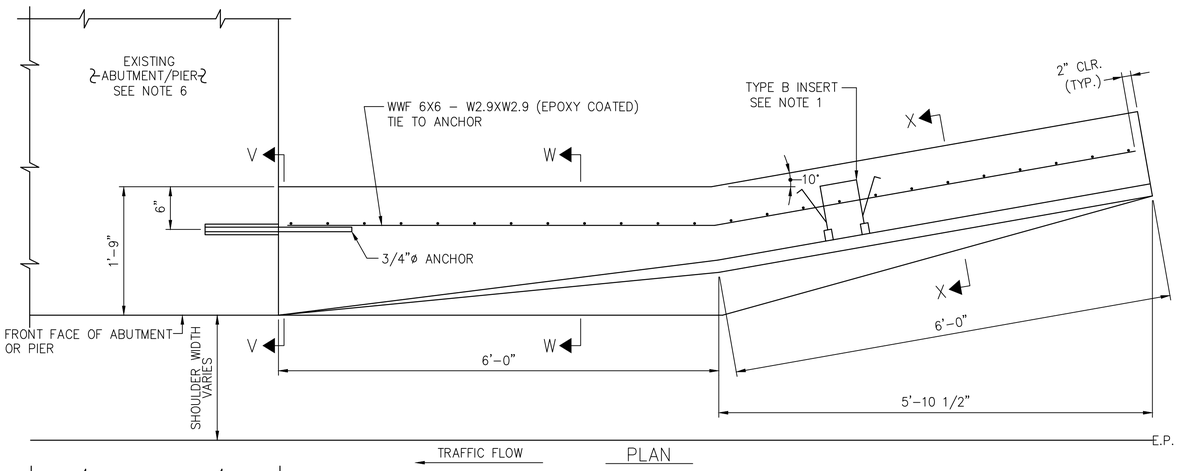
PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

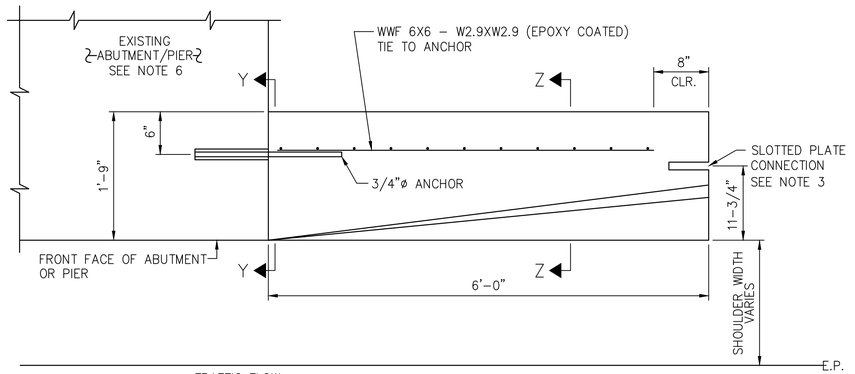
FILE NAME: PTS-144-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

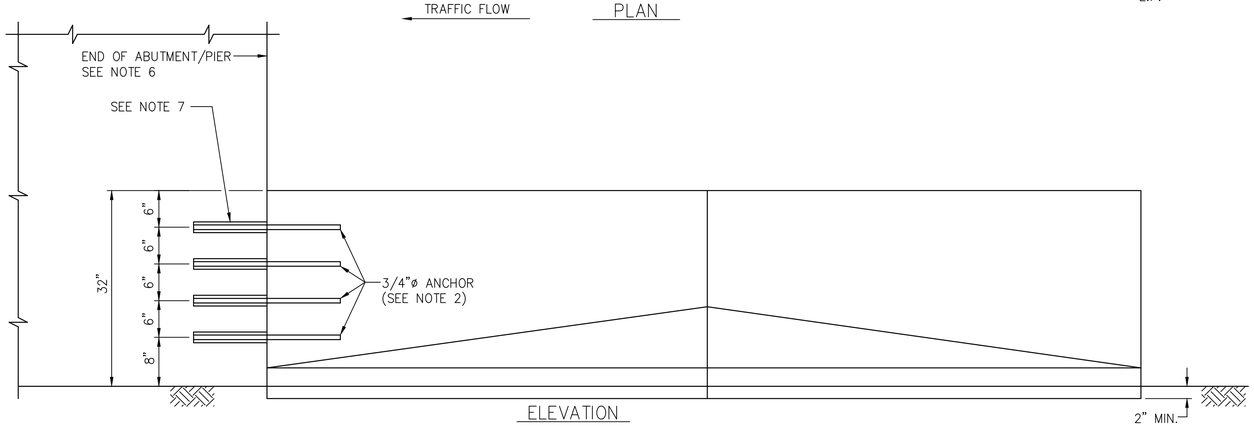
DATE: JANUARY 2019

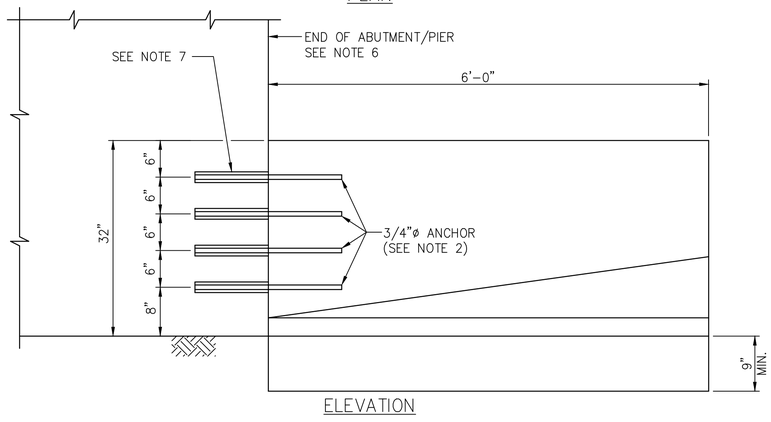
PTS-144

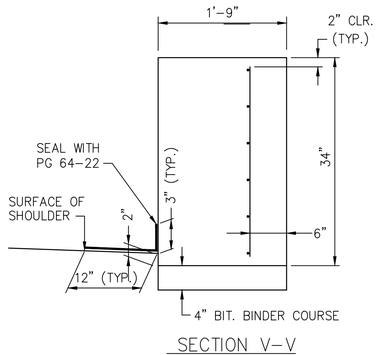
FOR NOTES SEE SHEET 2 OF 2.



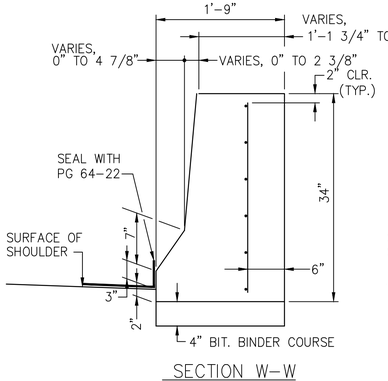






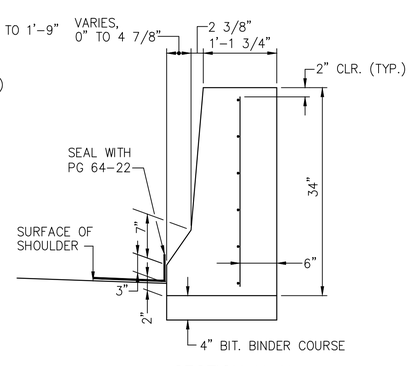


SECTION V–V

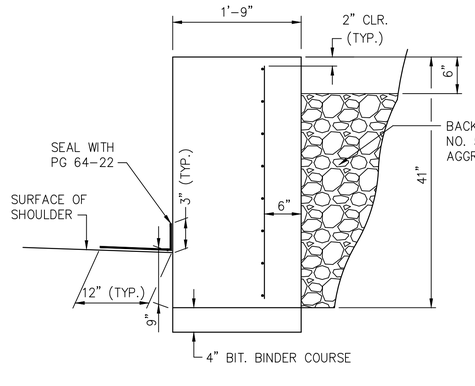


SECTION W–W
(F–SHAPE)

ABUTMENT TRANSITION PIECE TYPE I
(TRANSITION TO STRONG POST GUIDE RAIL)

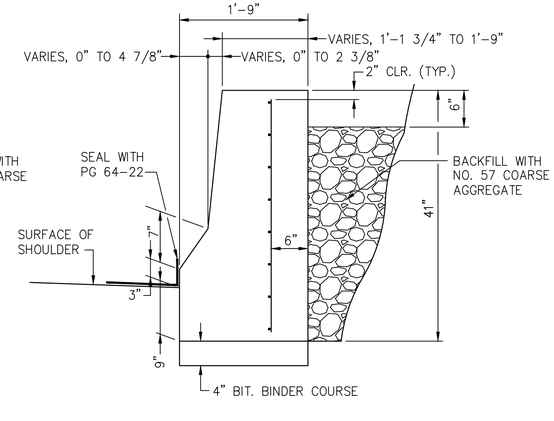


SECTION X–X
(F–SHAPE)



SECTION Y–Y

ABUTMENT TRANSITION PIECE TYPE II
(TRANSITION TO 41" HEIGHT SINGLE FACE CONCRETE BARRIER)



SECTION Z–Z
(F–SHAPE)

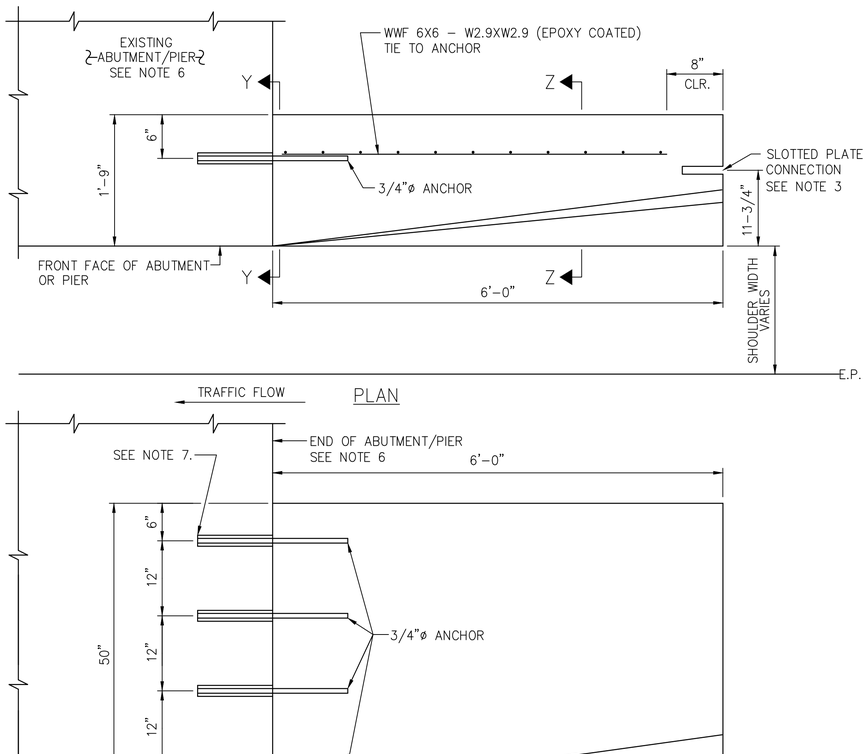
PENNA TURN PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

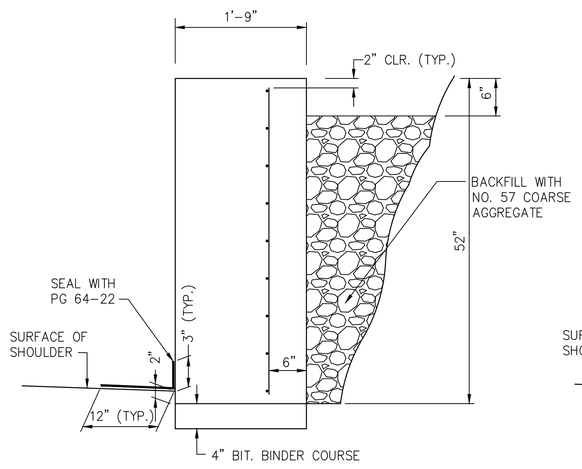
ABUTMENT TRANSITION PIECES TYPE I AND TYPE II

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

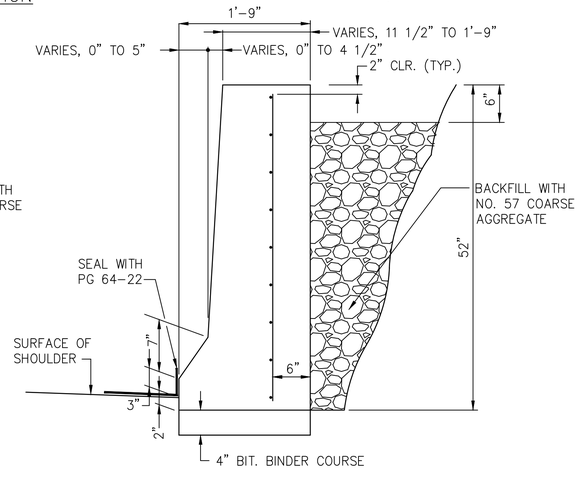
FILE NAME: PTS-145-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 2
DATE: JANUARY 2019
PTS-145



ELEVATION



SECTION Y–Y



SECTION Z–Z
(F–SHAPE)

ABUTMENT TRANSITION PIECE TYPE III
(TRANSITION TO 52" HEIGHT SINGLE FACE CONCRETE BARRIER)

NOTES:

1. SEE BC–734M FOR DETAILS OF TYPE B INSERT.
2. USE ADHESIVE ANCHORS IN THE EXISTING ABUTMENT OR PIER COLUMNS TO CONNECT THE ABUTMENT TRANSITION PIECE TO THE PIER. ANCHORS ARE TO BE STEEL REINFORCEMENT fy = 60 KSI, EPOXY COATED OR GALVANIZED.
3. PROVIDE A SLOT AND REINFORCEMENT STIRRUPS IN THE TRANSITION PIECE AS SHOWN ON RC–58M. CONTRACTOR TO VERIFY LOCATION OF SLOT TO ENSURE IT MATCHES UP WITH SLOT ON SINGLE FACE CONCRETE BARRIER.
4. CONSTRUCT USING CLASS AAA CEMENT CONCRETE IN ACCORDANCE WITH SECTION 704.
5. PROVIDE REINFORCEMENT MEETING THE REQUIREMENTS OF SECTION 709.
6. END OF ABUTMENT WALL MAY NOT BE PERPENDICULAR TO ROADWAY. IF PRECAST UNITS ARE USED, THE CONTRACTOR MUST FIELD VERIFY THE ABUTMENT ANGLE PRIOR TO PRECASTING TO ENSURE A PROPER INSTALLATION.
7. DRILL HOLE IN ABUTMENT OR PIER COLUMN TO THE DEPTH AND DIAMETER AS PER THE MANUFACTORS RECOMMENDATIONS FOR A 3/4"ø ANCHOR.
8. PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS UNLESS NOTED OTHERWISE.
9. ALL REINFORCEMENT BARS TO BE EPOXY COATED.

PENNA TURN PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

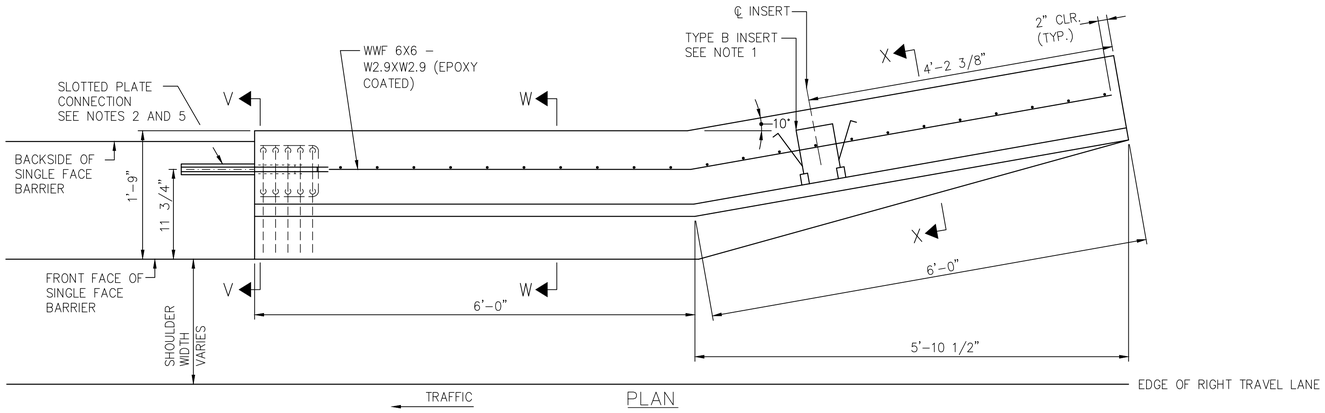
ABUTMENT TRANSITION PIECES TYPE III

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

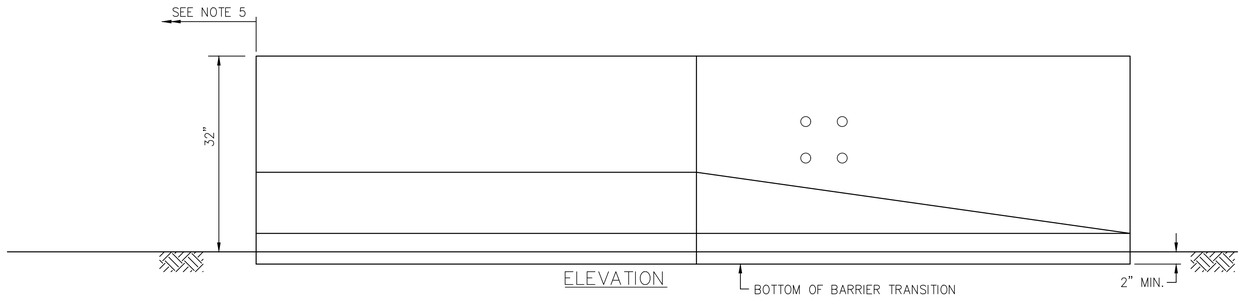
FILE NAME: PTS-145-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 2

DATE: JANUARY 2019

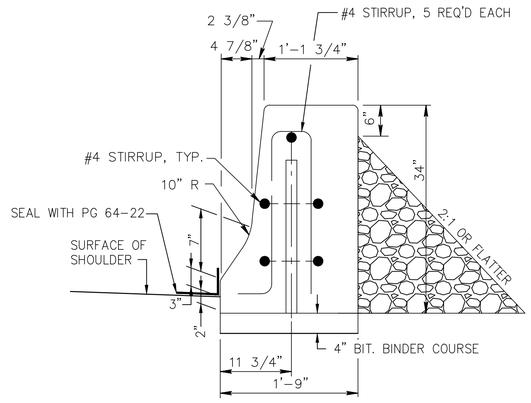
PTS-145



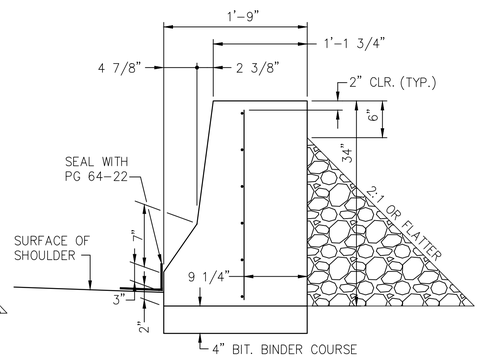
PLAN



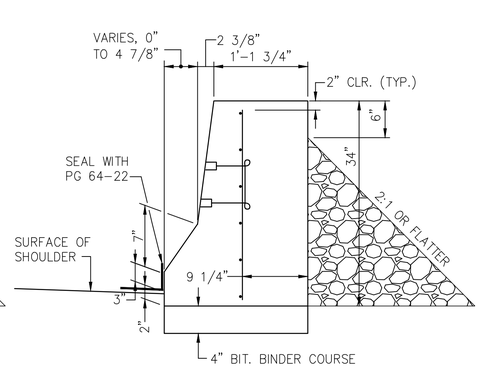
ELEVATION



SECTION V–V
(F–SHAPE)



SECTION W–W



SECTION X–X

GUIDE RAIL TO SINGLE FACE BARRIER TRANSITION

(TRANSITION TO STRONG POST GUIDE RAIL)

NOTES:
1. SEE BC–734M FOR DETAILS OF TYPE B INSERT.
2. PROVIDE A SLOT AND REINFORCEMENT STIRRUPS IN THE TRANSITION PIECE AS SHOWN ON RC–58M.
3. BACKUP TRANSITION WITH NO. 57 COARSE AGGREGATE.
4. CONSTRUCT USING CLASS AAA CEMENT CONCRETE IN ACCORDANCE WITH SECTION 704.
5. INSTALL TRAILING END OF TRANSITION DIRECTLY TO SINGLE FACE BARRIER, 41" HEIGHT OR INSTALL DIRECTLY TO TRANSITION SECTION, 52" TO 34". SEE PTS–142.
6. IF REQUIRED PER CONTRACT DRAWINGS, BITUMINOUS CURB SHALL BE FORMED TO INTERSECT BARRIER TRANSITION BELOW TYPE B INSERT.

PENNA TURN PIKE

RECOMMENDED: DECEMBER 28, 2017
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: DECEMBER 29, 2017
CHIEF ENGINEER

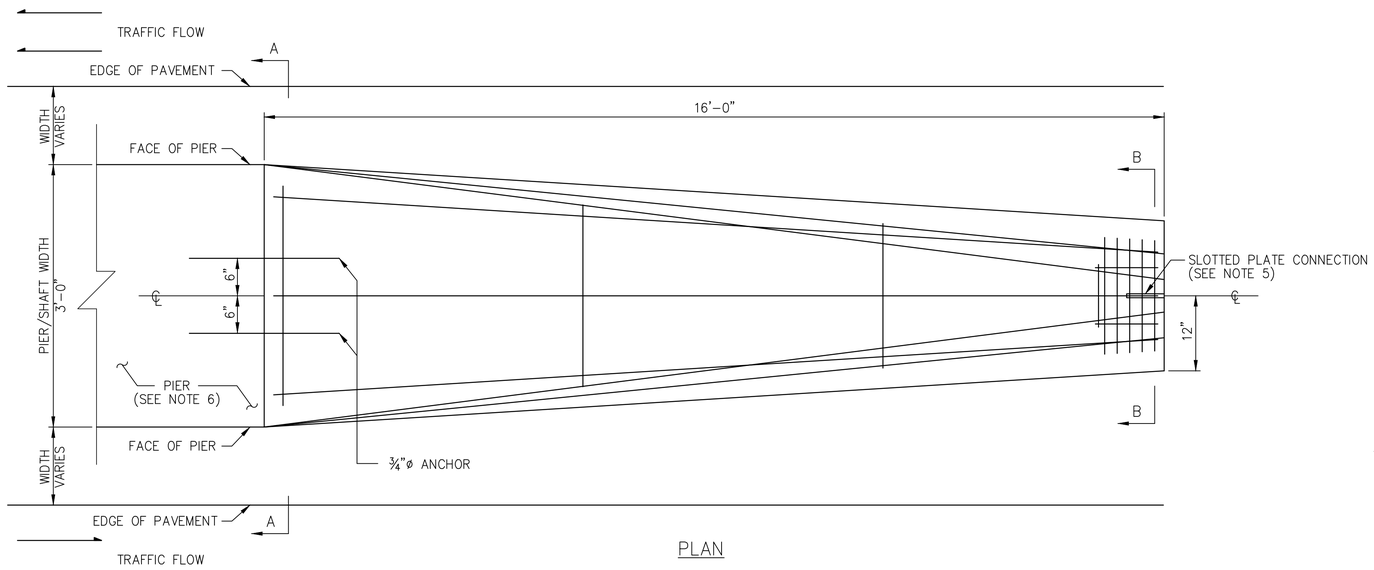
GUIDE RAIL TO SINGLE FACE CONCRETE BARRIER

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

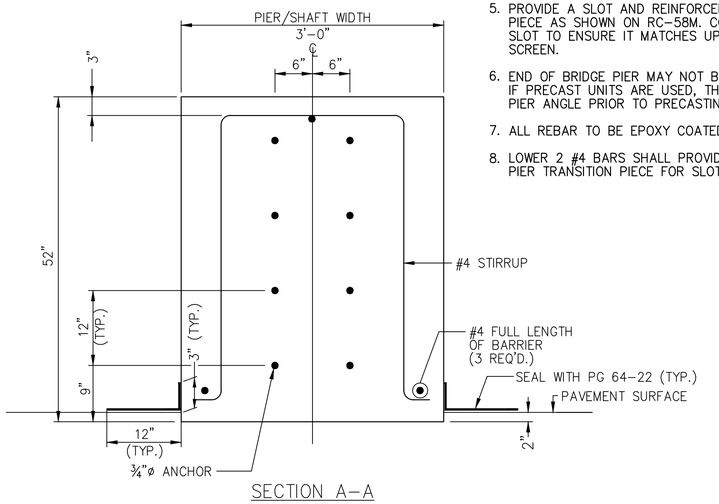
FILE NAME: PTS-146-2.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-146



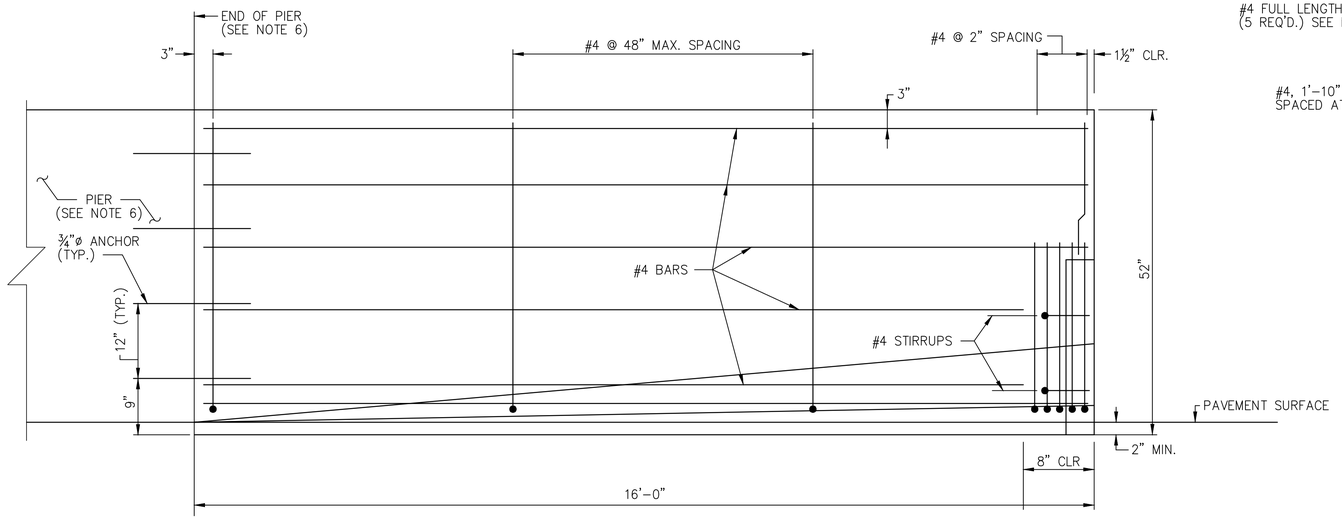
PLAN



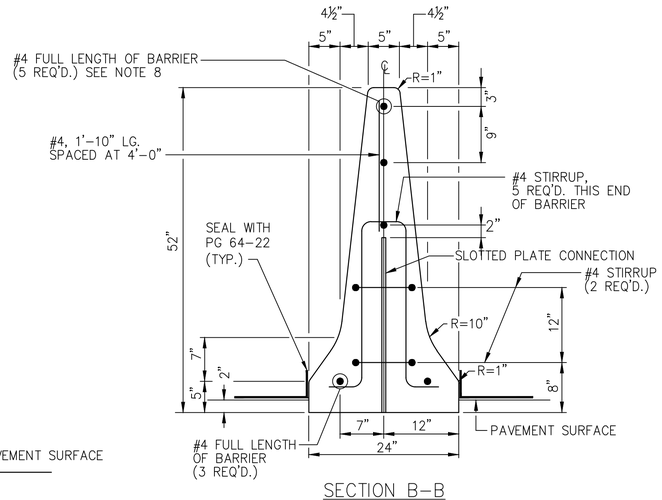
SECTION A-A

NOTES:

1. USE ADHESIVE ANCHORS IN THE EXISTING PIER COLUMNS TO CONNECT THE PIER TRANSITION PIECE TO THE PIER. ANCHORS ARE TO BE STEEL REINFORCEMENT fy = 60 KSI, EPOXY COATED OR GALVANIZED.
2. CONSTRUCT USING CLASS AAA CEMENT CONCRETE IN ACCORDANCE WITH SECTION 704.
3. PROVIDE REINFORCMENT MEETING THE RQUIREMENTS OF SECTION 709.
4. DRILL HOLE IN PIER COLUMN TO THE DEPTH AND DIAMETER AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR A ¾"ø ANCHOR.
5. PROVIDE A SLOT AND REINFORCEMENT STIRRUPS IN THE TRANSITION PIECE AS SHOWN ON RC-58M. CONTRACTOR TO VERIFY LOCATION OF SLOT TO ENSURE IT MATCHES UP WITH SLOT ON CONCRETE GLARE SCREEN.
6. END OF BRIDGE PIER MAY NOT BE PERPENDICULAR TO ROADWAY. IF PRECAST UNITS ARE USED, THE CONTRACTOR MUST FIELD VERIFY THE PIER ANGLE PRIOR TO PRECASTING TO ENSURE A PROPER INSTALLATION.
7. ALL REBAR TO BE EPOXY COATED.
8. LOWER 2 #4 BARS SHALL PROVIDE 8" OF CLEARANCE FROM END OF PIER TRANSITION PIECE FOR SLOT AND REINFORCEMENT STIRRUPS.



ELEVATION



SECTION B-B

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 5, 2015

CHIEF ENGINEER

PIER TRANSITION PIECE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-147.dwg

DRAWING TYPE: 5A

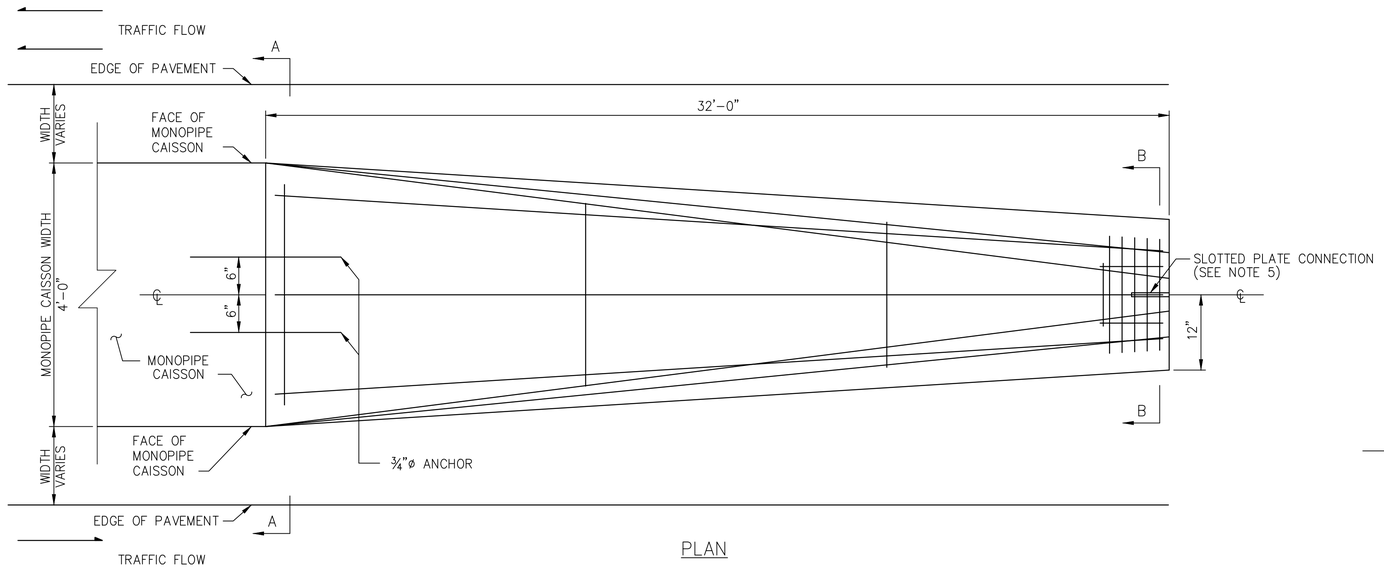
SHEET 1 OF 1

DATE: JANUARY 2019

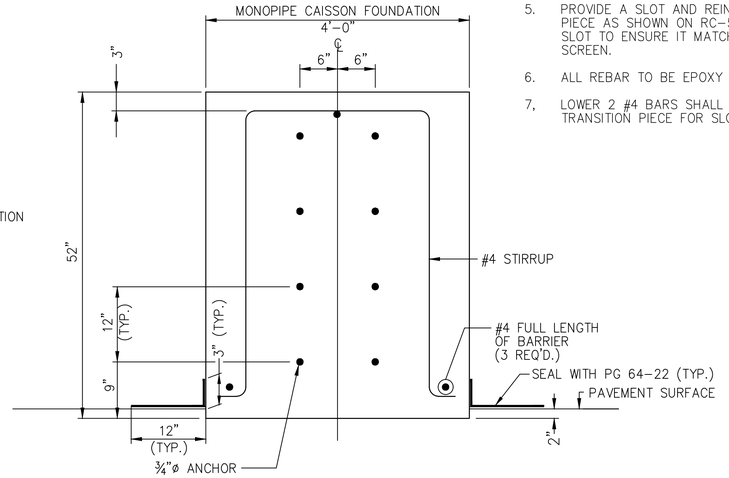
PTS-147

NOTES:

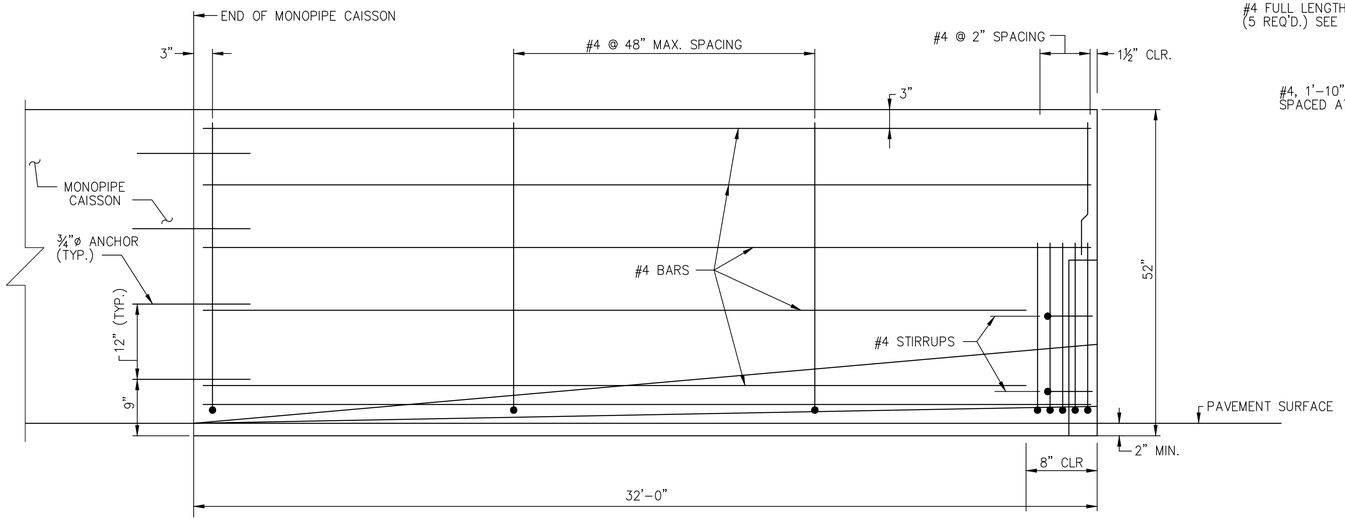
1. USE ADHESIVE ANCHORS IN THE MONOPIPE CAISSON TO CONNECT THE MONOPIPE CAISSON TRANSITION PIECE TO THE MONOPIPE CAISSON. ANCHORS ARE TO BE STEEL REINFORCEMENT fy = 60 KSI, EPOXY COATED OR GALVANIZED.
2. CONSTRUCT USING CLASS AAA CEMENT CONCRETE IN ACCORDANCE WITH SECTION 704.
3. PROVIDE REINFORCEMENT MEETING THE REQUIREMENTS OF SECTION 709.
4. DRILL HOLE IN MONOPIPE CAISSON TO THE DEPTH AND DIAMETER AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR A ¾"ø ANCHOR.
5. PROVIDE A SLOT AND REINFORCEMENT STIRRUPS IN THE TRANSITION PIECE AS SHOWN ON RC-59M. CONTRACTOR TO VERIFY LOCATION OF SLOT TO ENSURE IT MATCHES UP WITH SLOT ON CONCRETE GLARE SCREEN.
6. ALL REBAR TO BE EPOXY COATED.
7. LOWER 2 #4 BARS SHALL PROVIDE 8" OF CLEARANCE FROM END OF TRANSITION PIECE FOR SLOT AND REINFORCEMENT STIRRUPS.



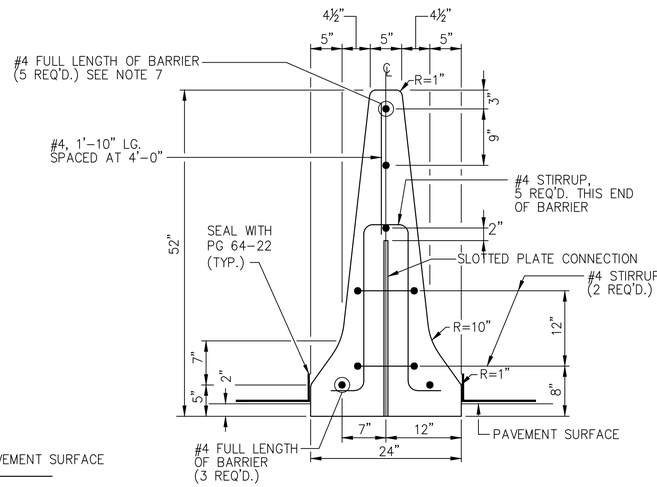
PLAN



SECTION A-A



ELEVATION



SECTION B-B

PENNA TURNPIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

MONOPIPE CAISSON TRANSITION PIECE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

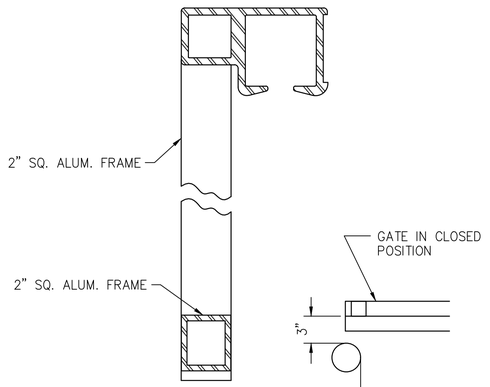
FILE NAME: PTS-148.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

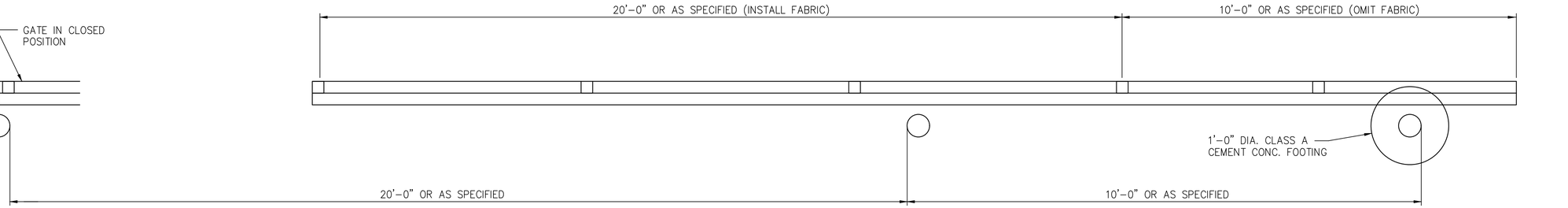
PTS-148

NOTES:

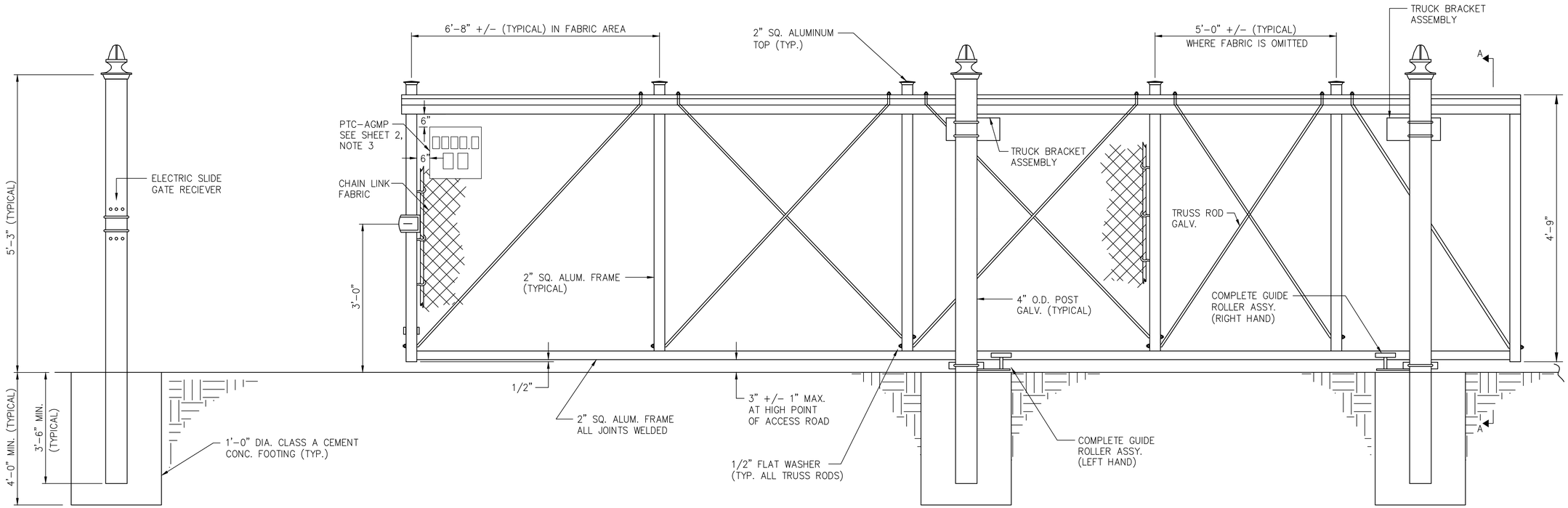
1. USE CANTILEVER SLIDING ACCESS GATES MANUFACTURED BY SECURITY FENCE CO., OR AN APPROVED EQUAL CONFORMING TO THE SPECIFICATIONS OF THE SPECIAL PROVISION.



SECTION "A–A"



PLAN VIEW



ELEVATION VIEW

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 24, 2019

CHIEF ENGINEER

CANTILEVER SLIDING ACCESS GATE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-150-1.dwg

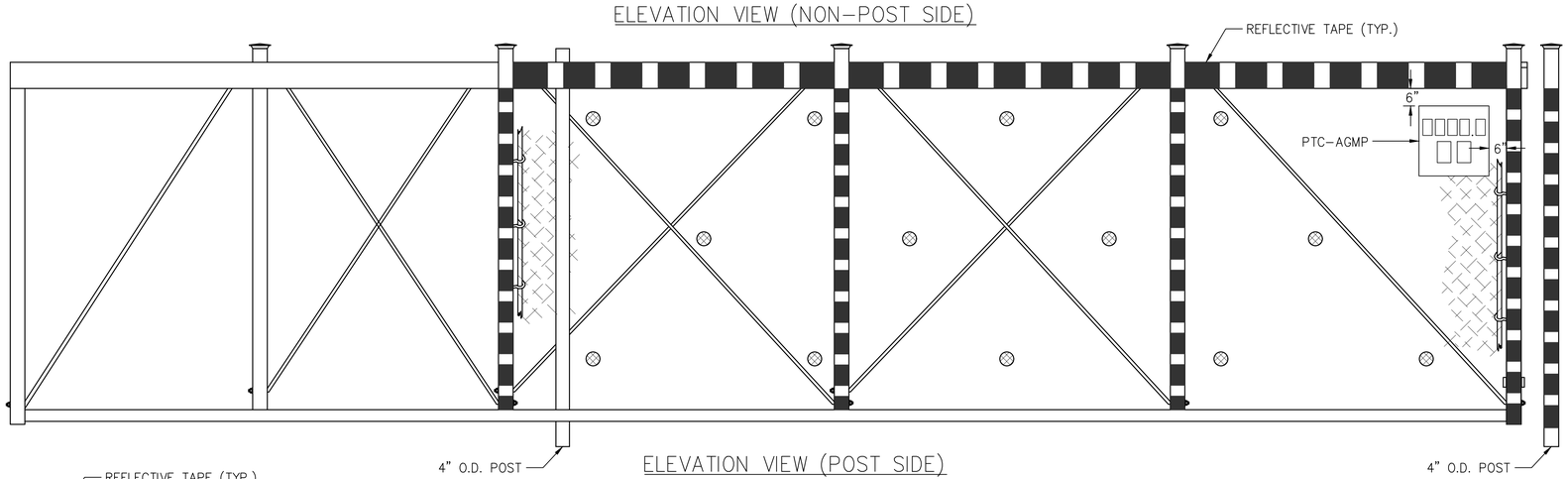
DRAWING TYPE: 5A

SHEET 1 OF 2

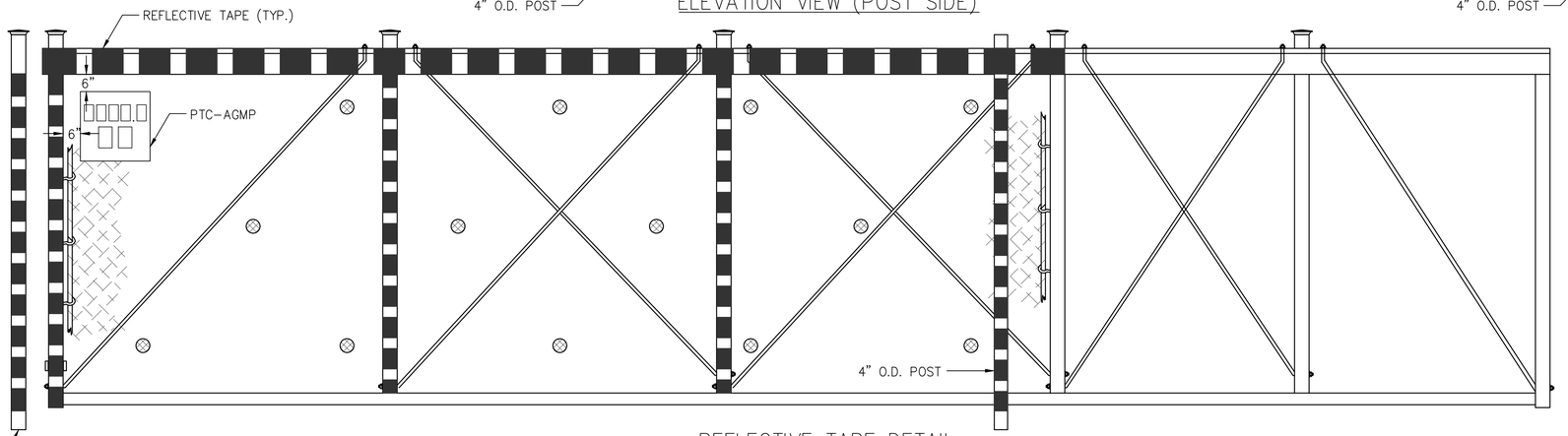
DATE: JANUARY 2019

PTS-150

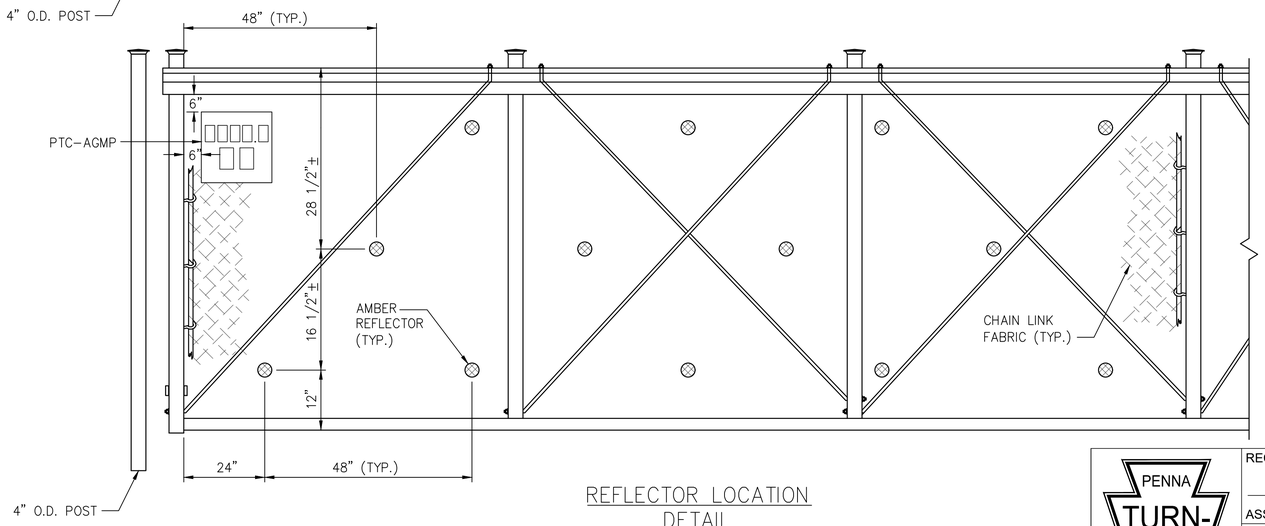
ELEVATION VIEW (NON-POST SIDE)



ELEVATION VIEW (POST SIDE)



REFLECTIVE TAPE DETAIL



REFLECTOR LOCATION DETAIL

NOTES:

1. ATTACH AMBER REFLECTORS TO THE GATE, BACK TO BACK THROUGH THE CHAIN LINK FABRIC, AT THE LOCATIONS SHOWN BY USE OF AN ANTI-THEFT BOLT AND NUT.
2. REFLECTIVE TAPE SHALL BE 3M DIAMOND GRADE CONSPICUITY MARKING ROLL, NUMBER 983-326, COLOR RED/WHITE, WIDTH 50 mm (2 INCHES) OR APPROVED EQUAL.
3. INSTALL PTC-AGMP SIGN TO THE GATE, BACK TO BACK THROUGH THE CHAIN LINK FABRIC, AT THE LOCATION SHOWN BY USE OF TWO (2) STAINLESS STEEL ANTI-THEFT BOLTS WITH NYLON OR STAINLESS STEEL WASHERS AND NUTS.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

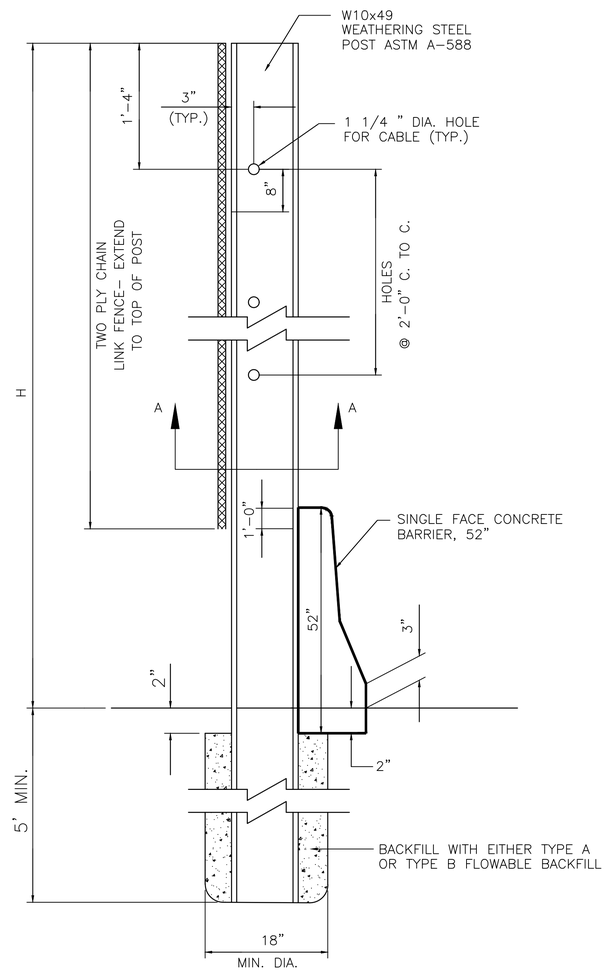
CANTILEVER SLIDING ACCESS GATE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

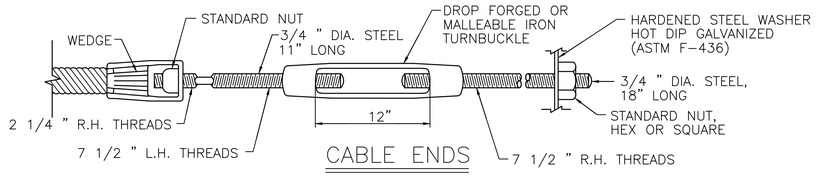
FILE NAME: PTS-150-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 2

DATE: JANUARY 2019

PTS-150

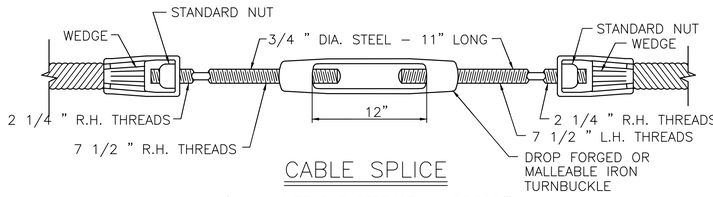


POST, FENCE DETAILS FOR ROCK FALL FENCE
AND SINGLE FACE CONCRETE BARRIER



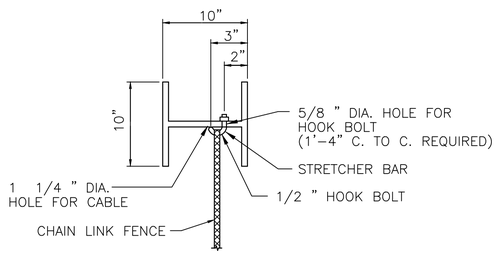
CABLE ENDS

(MINIMUM TENSILE STRENGTH – 25,000#)



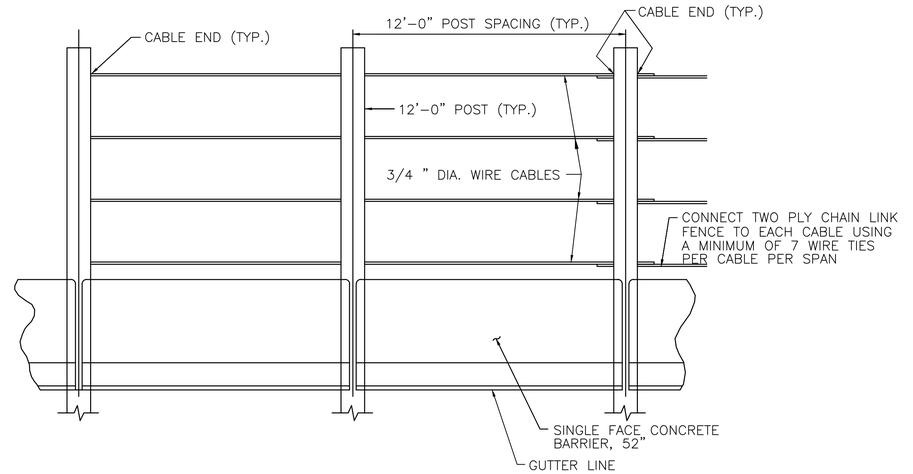
CABLE SPLICE

(MINIMUM TENSILE STRENGTH – 25,000#)



SECTION A–A

NOTE: APPLIES ONLY TO END POSTS



POST AND FENCE DETAILS FOR ROCK FALL FENCE

NOTES:

1. CABLE ENDS SHALL BE POSITIVE AND OF ANY TYPE AND DESIGN CONSISTENT WITH THE DESIGN INTENT AND STRENGTH OF THE STRUCTURE, AND APPROVED BY THE REPRESENTATIVE.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

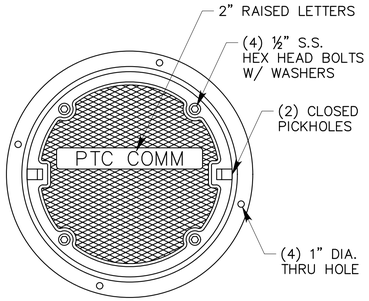
ROCK FALL FENCE

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

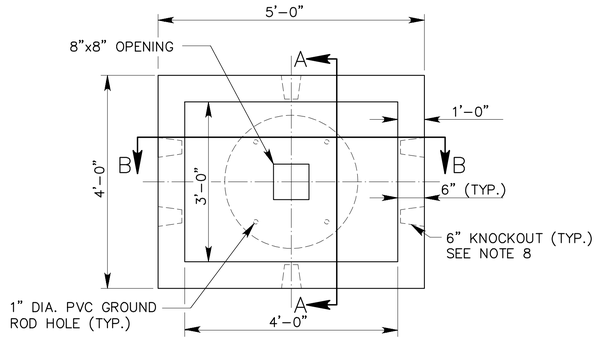
FILE NAME: PTS-154.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

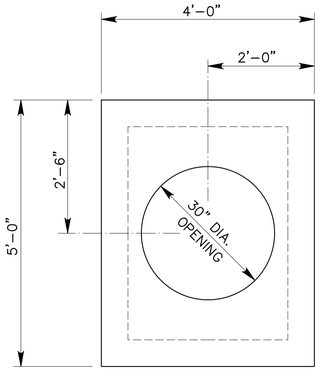
PTS-154



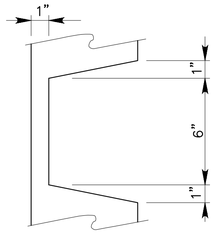
PLAN



PLAN



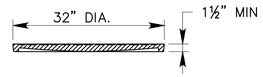
TOP SLAB



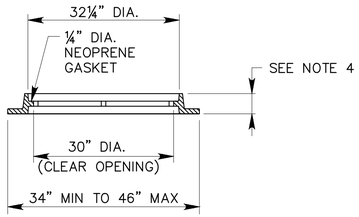
KNOCKOUT DETAIL

NOTES:

1. REINFORCEMENT AND DETAILS FOR THE PRECAST CONCRETE JUNCTION BOX AND TOP SLAP TO CONFORM TO RC–46M.
2. REINFORCEMENT AND THICKNESS FOR THE PRECAST CONCRETE JUNCTION BOX TO CONFORM TO A TYPE 4 INLET BOX – BASE SECTION.
3. REINFORCEMENT AND THICKNESS FOR THE PRECAST CONCRETE TOP SLAB TO CONFORM TO A TOP SLAB FOR A TYPE 4 INLET BOX.
4. MANHOLE COVER AND FRAME TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF RC–39M AND VERTICAL DEPTH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
5. ATTACH THE MANHOLE COVER TO THE FRAME USING COUNTERSUNK STAINLESS STEEL HEX BOLTS.
6. PROVIDE PRECAST CONCRETE ADJUSTMENT RING OR STRUCTURAL STEEL GRADE ADJUSTMENT RISERS PER RC–39M IF REQUIRED.
7. MANHOLE STEPS ARE NOT REQUIRED.
8. 4" DIAMETER CONDUIT SLEEVES CAN BE SUBSTITUTED FOR 6" KNOCKOUTS.
9. INSIDE CORE MAY BE TAPERED TO ALLOW FORM STRIPPING.
10. REFER TO CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

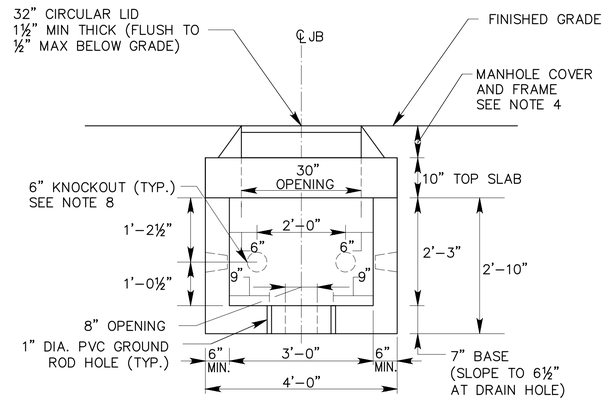


COVER SECTION

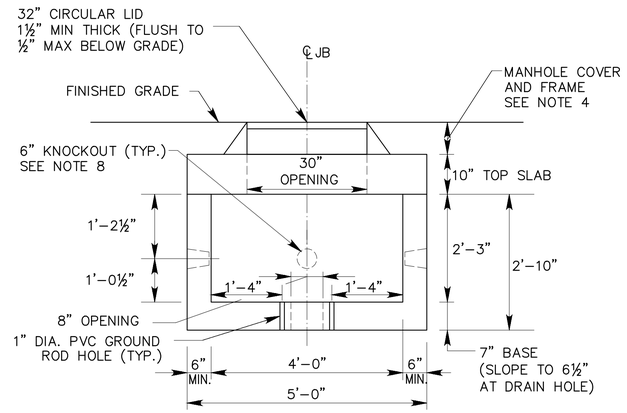


FRAME SECTION

MANHOLE COVER AND FRAME



SECTION A–A



SECTION B–B

ROUND LID JUNCTION BOX DETAILS

PENNA TURN PIKE

RECOMMENDED: APRIL 5, 2021

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: APRIL 6, 2021

CHIEF ENGINEER

ITS INFRASTRUCTURE

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

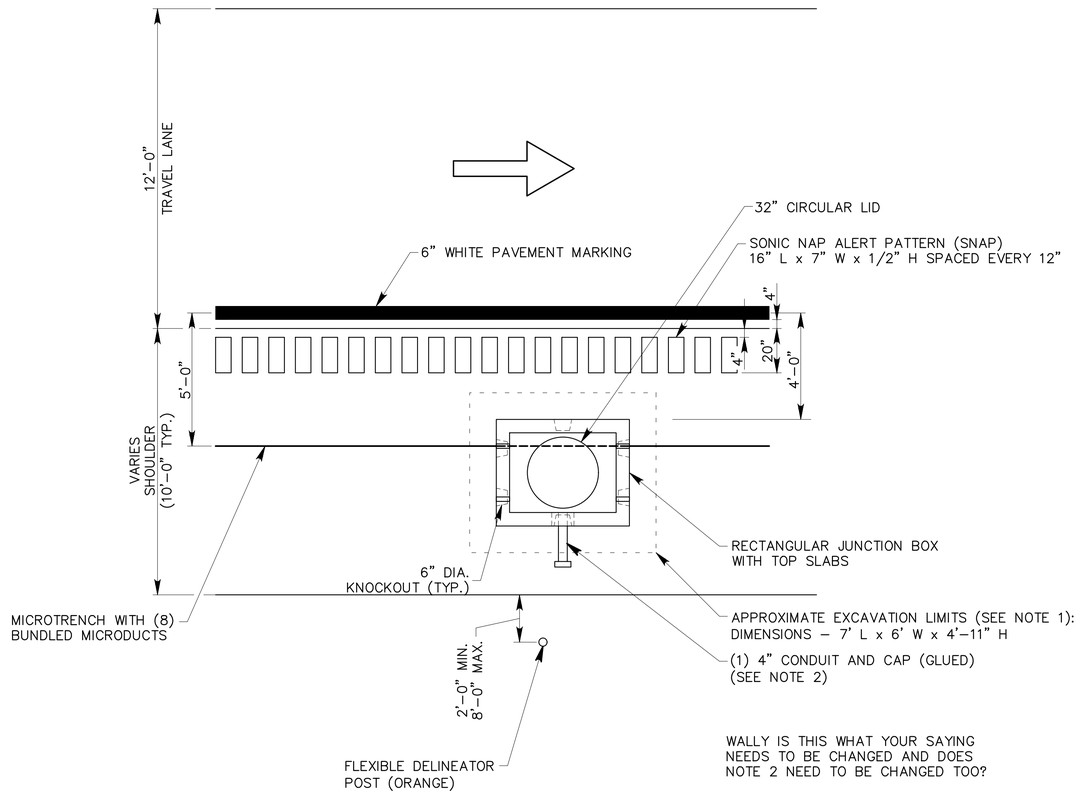
FILE NAME: PTS-170.dwg

DRAWING TYPE: 5A

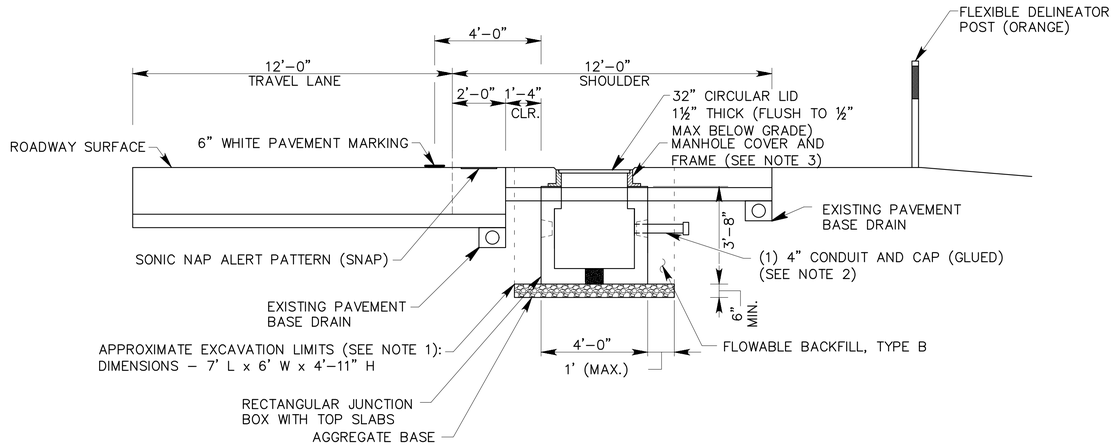
SHEET 1 OF 2

DATE: APRIL 2021

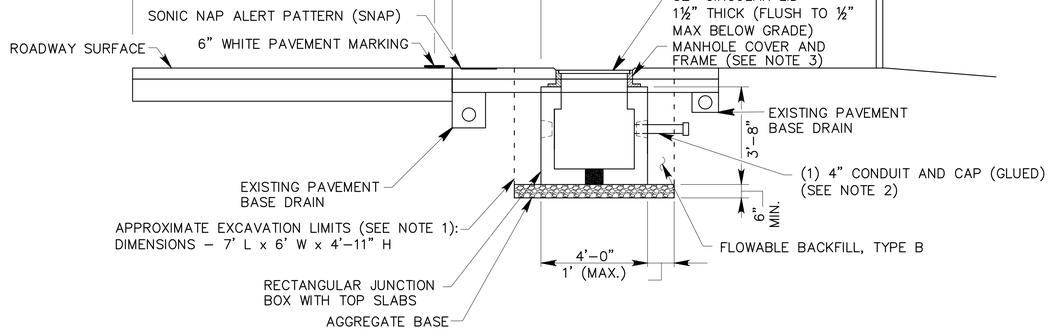
PTS-170



RECTANGULAR JUNCTION BOX – TOP VIEW



RECONSTRUCTION TYPICAL SECTION



ORIGINAL PA TURNPIKE TYPICAL SECTION

ROUND LID JUNCTION BOX DETAILS

NOTES:
1. SAW CUT PAVEMENT PRIOR TO EXCAVATION.
2. CAP CONDUIT AT APPROXIMATELY 3" BEYOND FLOWABLE FILL. CONTRACTOR SHALL NOT ENCASE CAP WITH FLOWABLE FILL. CONDUIT IS A MINIMUM OF 24" DEPTH.
3. THICKNESS IN ACCORDANCE WITH THE CONTRACT DOCUMENT.

PENNA TURN PIKE

RECOMMENDED: APRIL 5, 2021
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: APRIL 6, 2021
CHIEF ENGINEER

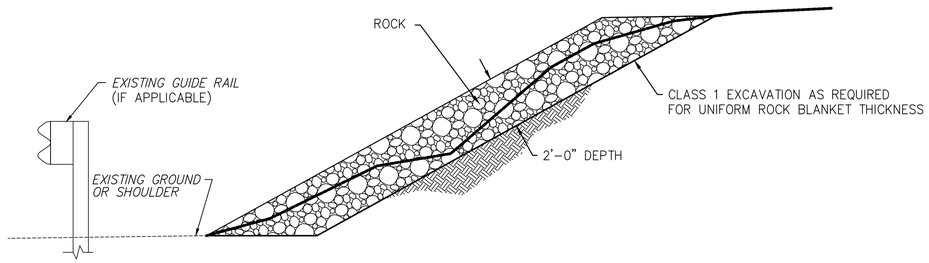
ITS INFRASTRUCTURE

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

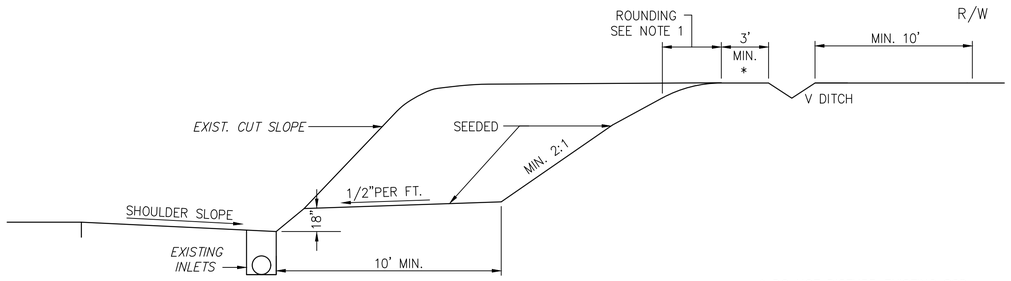
FILE NAME: PTS-170.dwg
DRAWING TYPE: 5A
SHEET 2 OF 2

DATE: APRIL 2021

PTS-170

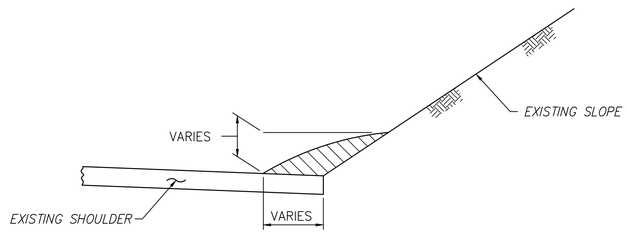


TYPICAL SECTION OF ROCK BLANKET



* DO NOT DISTURB EXISTING SOD.

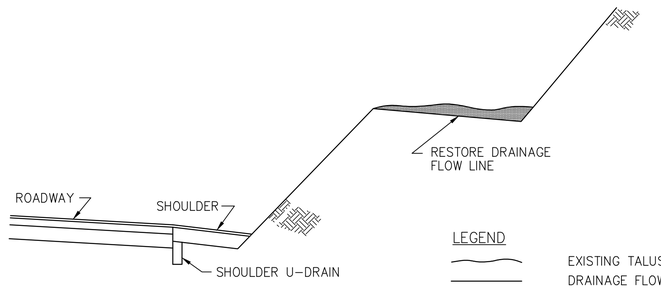
TYPICAL SECTION OF BORROW PITS



REMOVAL OF EARTH DEBRIS ON SHOULDER

THIS WORK IS INCIDENTAL TO
OTHER ITEMS OF WORK.

= AREA TO BE CLEANED

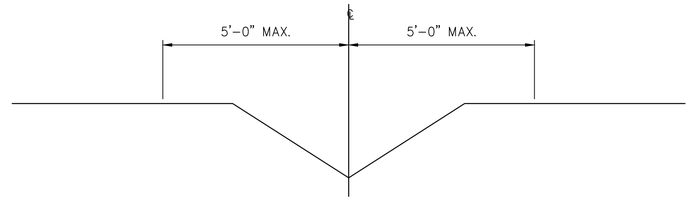


CLEANING OF CUT BENCHES

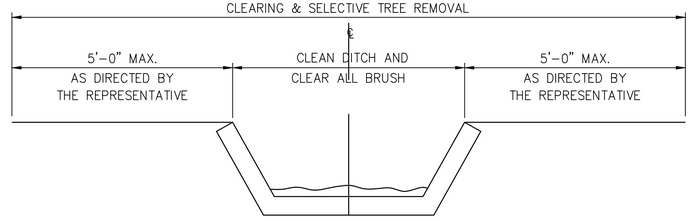
NOTE: CLEAN ALL BENCHES AS TABULATED.
PERFORM CLEARING AND SELECTIVE TREE
REMOVAL IN ACCORDANCE WITH SECTION 810.
SEED AND MULCH IN ACCORDANCE WITH
SECTIONS 804 & 805 AND AS DIRECTED BY THE REPRESENTATIVE.

NOTES:

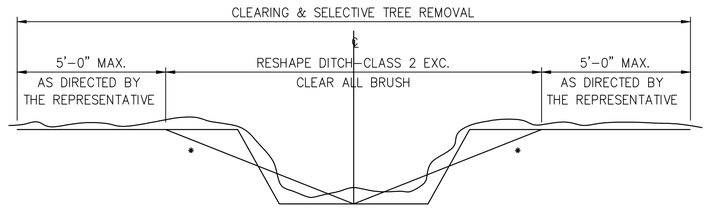
1. ROUNDING TO BE AS PER RC-10M OR AS INDICATED ON THE CROSS SECTIONS.
2. SEED AND MULCH ALL DISTURBED AREAS INCLUDING AREAS WHICH ARE CLEARED OF TREES AND SHRUBS IN ACCORDANCE WITH SECTION 804 AND 805.
3. FURNISH AND PLACE TOPSOIL IN ACCORDANCE WITH SECTION 802.



LIMITS OF SWALE CLEARING



CLEAN DITCH AND CLEAR BRUSH-CONCRETE PAVED DITCH



CLEAR BRUSH AND RESHAPE EXISTING EARTH DITCH

* 3:1 MAX. OR AS INDICATED

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

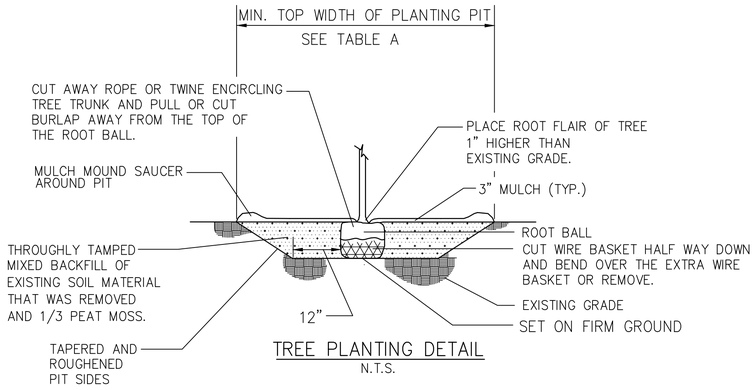
ROADSIDE DEVELOPMENT

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

FILE NAME: PTS-180-1.dwg
DRAWING TYPE: 5A
SHEET 1 OF 3

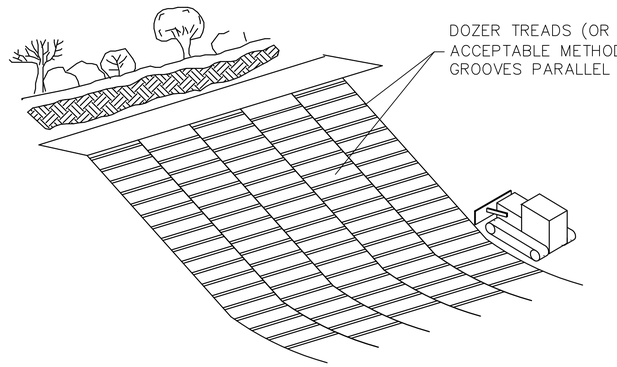
DATE: JANUARY 2019

PTS-180

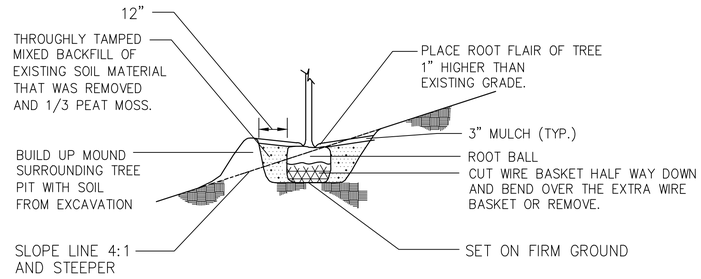


TREE PLANTING DETAIL
N.T.S.

NOTE: BEFORE DIGGING THE HOLE FOR THE TREE, REMOVE PART OF THE BURLPAP TO DETERMINE THE ROOT FLAIR. THE ROOT FLAIR MUST BE PLANTED 1" ABOVE FINISHED GRADE.



SLOPE PREPARATION
N.T.S.



SLOPE PLANTING DETAIL FOR DECIDUOUS AND EVERGREEN TREES
N.T.S.

NOTE: BEFORE DIGGING THE HOLE FOR THE TREE, REMOVE PART OF THE BURLPAP TO DETERMINE THE ROOT FLAIR. THE ROOT FLAIR MUST BE PLANTED 1" ABOVE FINISHED GRADE.

TABLE A

DECIDUOUS TREES
(B&B, AND WIRE ROOT PROTECTION DEVICES)

(CALIPER) Inches	MIN. TOP DIAMETER OF PLANTING PIT
1"	5'
1"–1.5"	5'
2"	6'
2–2.5"	6'
3"	7'
3–3.5"	7'
4"	8'

HEIGHT	MIN. TOP DIAMETER OF PLANTING PIT
4'–8'	5'

(BARE ROOT)

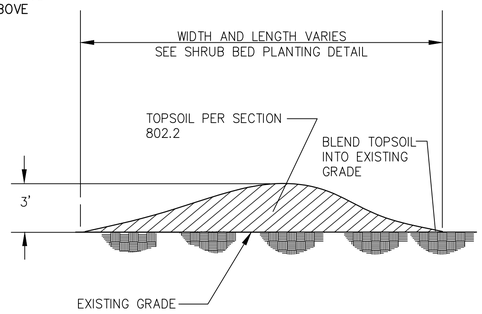
HEIGHT	MIN. TOP DIAMETER OF PLANTING PIT
4'–8'	5'

(CONTAINER GROWN)

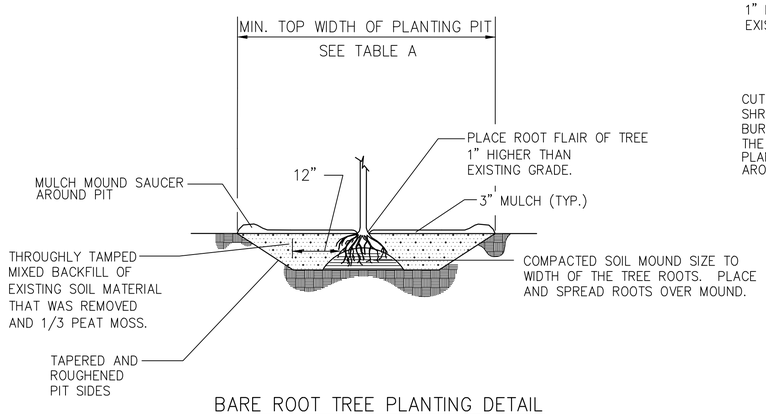
4' – #2 CONTAINER	3'
5' – #5 CONTAINER	4'
6' – #5 CONTAINER	4'
1–1/4" – #10 CONTAINER	5'
1–1/2" – #15 CONTAINER	5'

EVERGREEN TREES

TREE HEIGHT	MIN. TOP DIAMETER OF PLANTING PIT
3'–5.5'	5'
5.5'–8'	6'

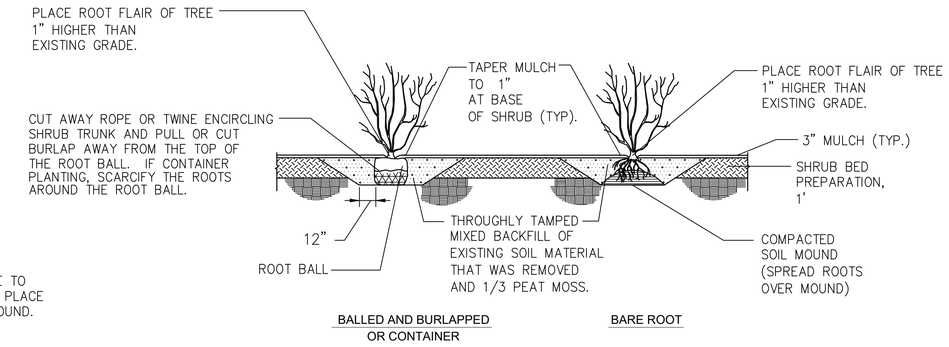


RAISED PLANTING BED DETAIL
N.T.S.



BARE ROOT TREE PLANTING DETAIL
N.T.S.

NOTE: THE ROOT FLAIR MUST BE PLANTED 1" TO 2" ABOVE FINISHED GRADE.



SHRUB PLANTING AND SHRUB BED PREPARATION DETAILS
N.T.S.

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

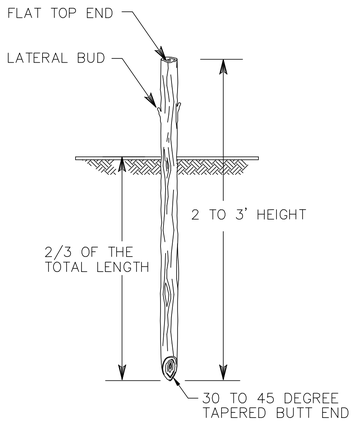
ROADSIDE DEVELOPMENT

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

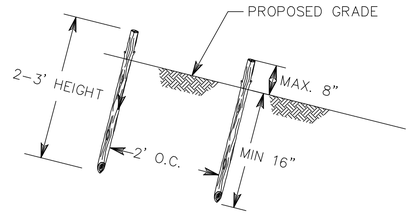
FILE NAME: PTS-180-2.dwg
DRAWING TYPE: 5A
SHEET 2 OF 3

DATE: JANUARY 2019

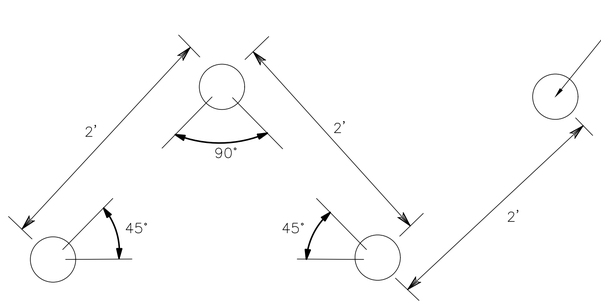
PTS-180



DETAIL
LIVE STAKES



SECTION VIEW
LIVE STAKES



PLAN VIEW
LIVE STAKES

NTS

NOTES:

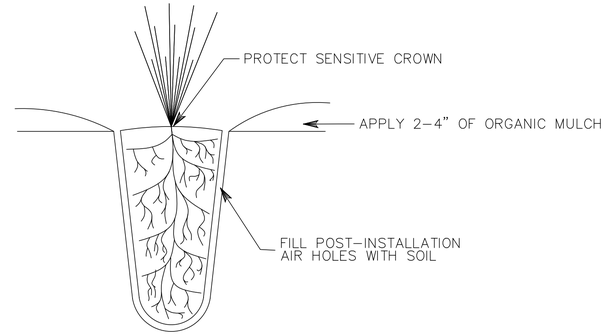
1. CREATE PILOT HOLES1 TO 2 INCHES IN DIAMETER.

2. WITH THE FLAT SIDE UP, HAMMER LIVE STAKES INTO THE PILOT HOLES UNTIL A MINIMUM OF 2/3RDS IS INTO THE GROUND.

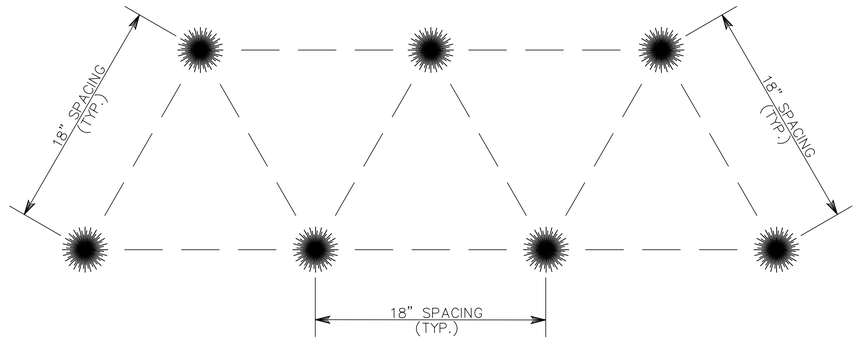
3. LIVE STAKES SHALL HAVE A DIAMETER OF 3/4 TO 1 1/2 INCHES.

4. FIRMLY PACK SOIL AROUND THE LIVE STAKE REMOVING ALL GAPS AND AIR POCKETS

5. SPACE LIVE STAKES 2 FEET APART.



SECTION VIEW
PLUGS



PLAN VIEW
PLUGS

PENNA TURN-PIKE

RECOMMENDED: JANUARY 24, 2019
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 24, 2019
CHIEF ENGINEER

ROADSIDE DEVELOPMENT

PENNSYLVANIA TURNPIKE COMMISSION
STANDARD DRAWING

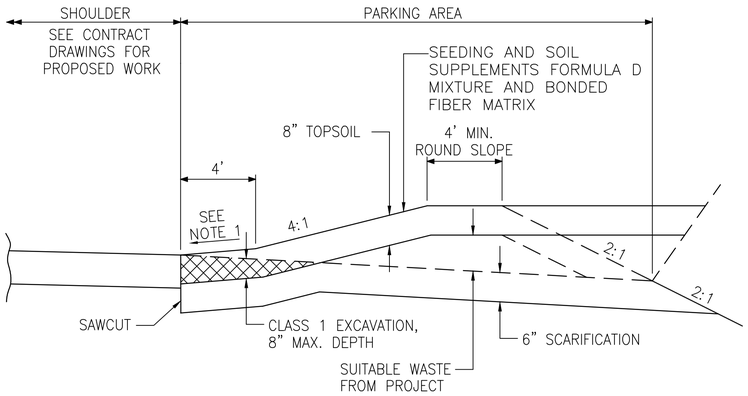
FILE NAME: PTS-180-1.dwg
DRAWING TYPE: 5A
SHEET 3 OF 3

DATE: JANUARY 2019

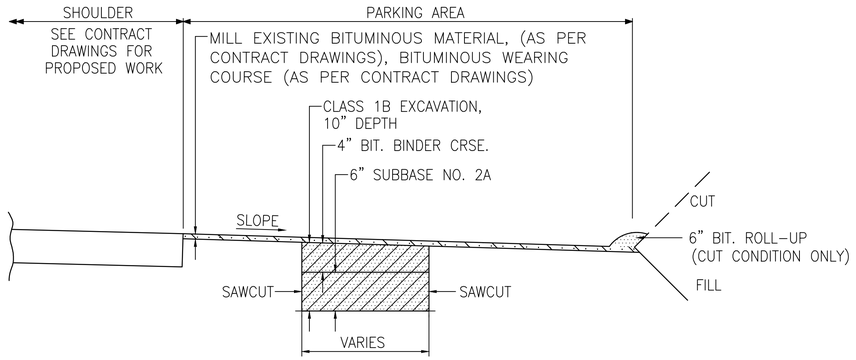
PTS-180

NOTES:

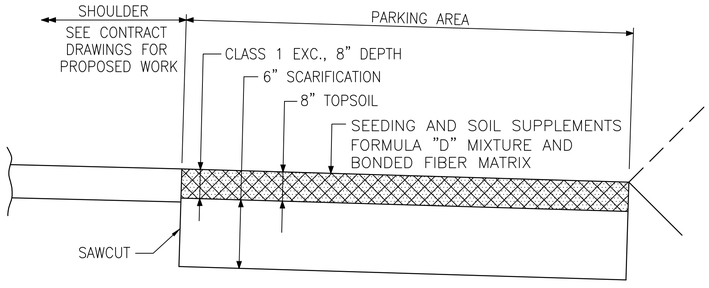
1. SLOPE FIRST 4–FEET OF MOUND TOWARDS EDGE OF SHOULDER AT 1"/FT IF INLETS EXIST IN THE SHOULDER. IF THERE ARE NO INLETS IN THE SHOULDER, SLOPE AWAY FROM SHOULDER AND GRADE TO DRAIN.
2. SAWCUT IS NOT REQUIRED IF A MILLING MACHINE IS USED TO PERFORM THE EXCAVATION



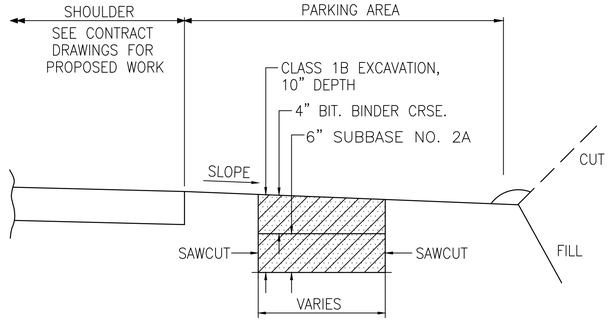
ELIMINATION OF PARKING AREAS, TYPE B



TYPICAL PARKING AREA REPAIR & MILL & OVERLAY



ELIMINATION OF PARKING AREAS, TYPE A



TYPICAL PARKING AREA REPAIR

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

PARKING AREAS

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

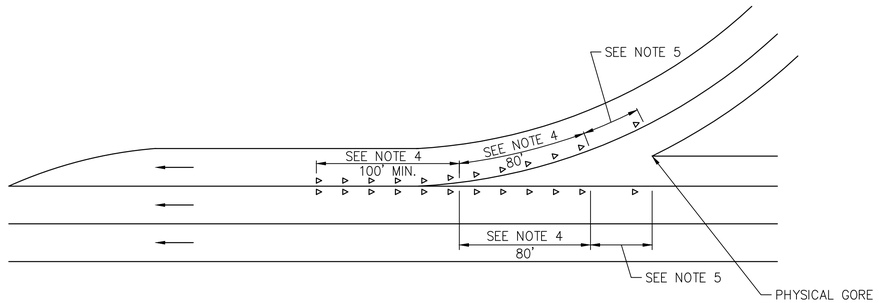
FILE NAME: PTS-181.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

DATE: JANUARY 2019

PTS-181

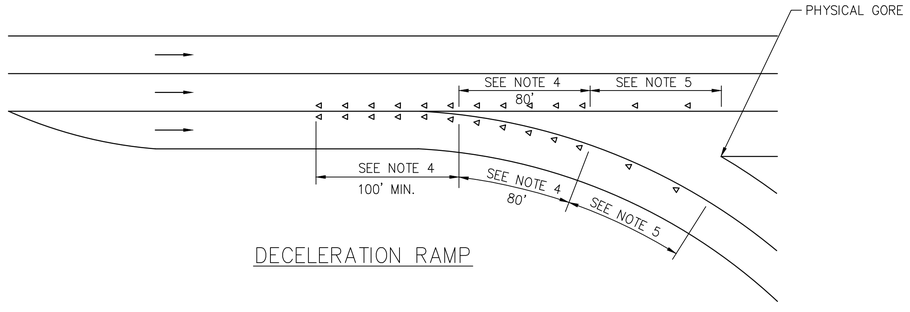
NOTES:

1. THE REPRESENTATIVE WILL APPROVE THE EXACT LOCATIONS OF THE MARKERS PRIOR TO INSTALLATION.
2. TYPICAL SPACING IS 80' C. TO C. EXCEPT ON CURVES GREATER THAN 1° WHERE THE SPACING IS 40' C. TO C. OR AS DIRECTED BY THE REPRESENTATIVE.
3. LOCATE MARKERS TWO (2) INCHES FROM THE EDGE OF THE PAINTED GORE LINES AND AS DIRECTED BY THE REPRESENTATIVE.
4. SPACE MARKERS AT 20' C. TO C. FOR A DISTANCE OF 100' MIN. BEFORE AND 80' BEYOND THE PAINTED GORE ON THE ACCELERATION AND DECELERATION RAMPS.
5. CONTINUE MARKERS TO THE PHYSICAL GORE AT 40' C. TO C. SPACING.
6. INSTALL MARKERS AFTER FINAL PAVEMENT MARKING.
7. SEE PTS-980 FOR PERMANENT TRAFFIC LINE MARKING.



ACCELERATION RAMP

INSTALLATION OF SNOWPLOWABLE RAISED PAVEMENT MARKERS



DECELERATION RAMP

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014
ASSISTANT CHIEF ENGINEER - DESIGN
APPROVED: JANUARY 5, 2015
CHIEF ENGINEER

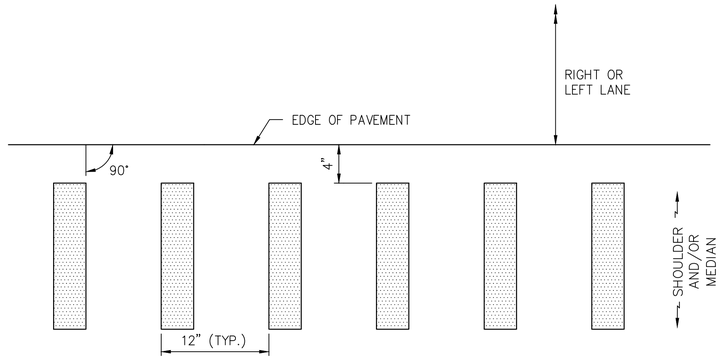
SNOWPLOWABLE RAISED PAVEMENT MARKERS (SRPM)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-191.dwg
DRAWING TYPE: 5A
SHEET 1 OF 1

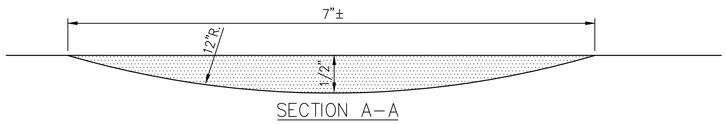
DATE: JANUARY 2019

PTS-191

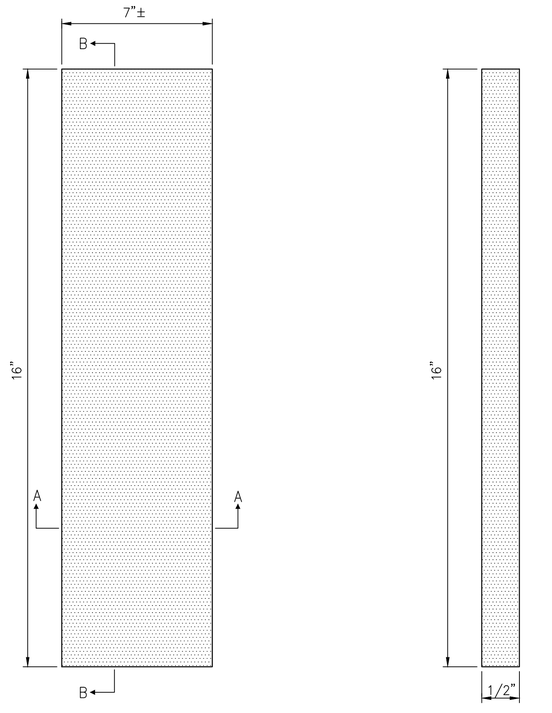


LOCATION DETAIL OF SONIC NAP ALERT PATTERN

SEE NOTE 4



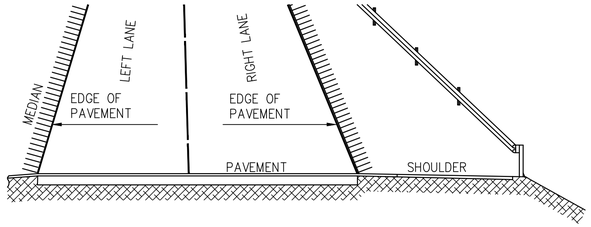
SECTION A–A



PLAN

SECTION B–B

DETAILS OF SONIC NAP ALERT PATTERN



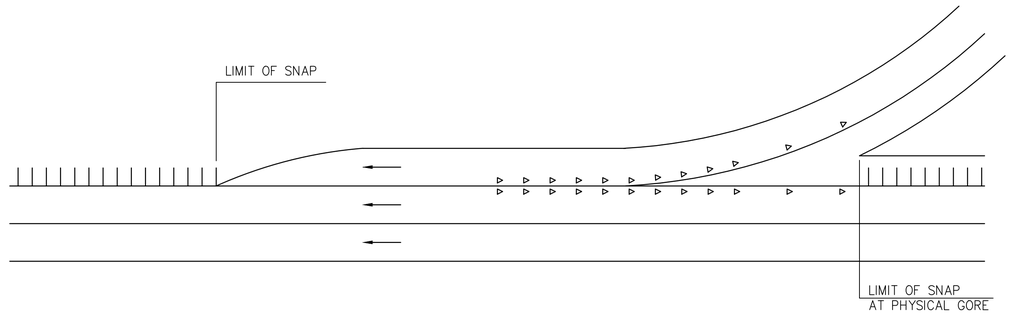
GENERAL VIEW

SONIC NAP ALERT PATTERN
(SNAP)

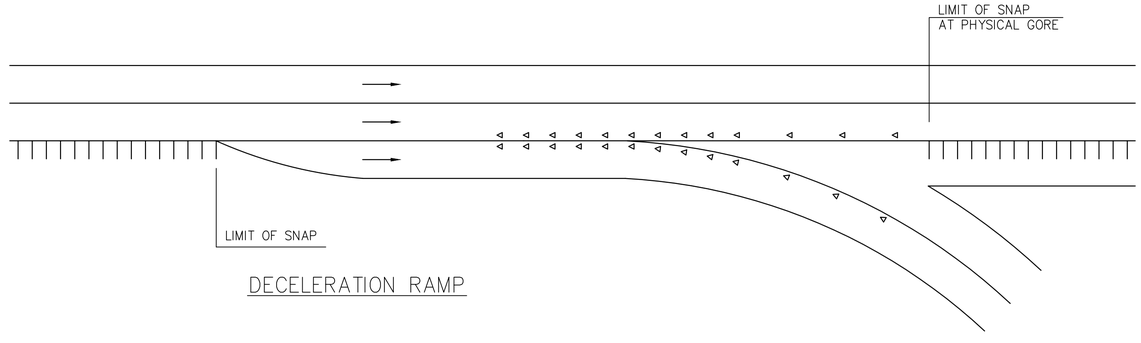
SEE NOTE 4

NOTES:

1. LIMIT OF SNAP ON ACCELERATION RAMP TO BEGIN AT PHYSICAL GORE.
2. LIMIT OF SNAP ON DECELERATION RAMP TO BEGIN AT PHYSICAL GORE.
3. INSTALL SNAP THROUGHOUT PROJECT LIMITS UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.
4. INSTALL SNAP IN MEDIAN–AREA WHEN OVERALL WIDTH OF MEDIAN IS GREATER THAN OR EQUAL TO 18 FEET.
5. INSTALL SNAP AFTER FINAL PAVEMENT MARKINGS.
6. SEE PTS–980 FOR PLACEMENT OF TRAFFIC LINE MARKINGS.
7. SEE PTS–112 FOR PLACEMENT OF JOINT SEALING AND SNAP.



ACCELERATION RAMP



DECELERATION RAMP

LIMITS AT INTERCHANGE AND SERVICE PLAZA RAMPS

LEGEND:

◁ ◁ (SRPM) SNOWPLOWABLE RAISED PAVEMENT MARKER

| | | | SNAP (SONIC NAP ALERT PATTERN)

PENNA TURN PIKE

RECOMMENDED: DECEMBER 31, 2014

ASSISTANT CHIEF ENGINEER - DESIGN

APPROVED: JANUARY 5, 2015

CHIEF ENGINEER

SONIC NAP ALERT PATTERN (SNAP)

PENNSYLVANIA TURNPIKE COMMISSION STANDARD DRAWING

FILE NAME: PTS-192.dwg

DRAWING TYPE: 5A

SHEET 1 OF 1

DATE: JANUARY 2019

PTS-192